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Worldwide Report

ENVIRONMENTAL QUALITY

No. 390

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STUDY SHOWS BALTIC RECOVERING FROM PCB, DDT DAMAGE

Stockholm DAGENS NYHETER in Swedish 17 Feb 83 p 36

[Text] The Baltic and the Gulf of Bothnia are recovering faster than any researcher had dared to hope for, at least with respect to levels of the dangerous environmental poisons PCB and DDT.

This is according to a comprehensive study of fish and seabirds submitted by the Environmental Protection Agency last Wednesday. The study is a compilation of tests made by Mats Olsson with the National Museum of Natural History and Lars Reutergard with the Environmental Protection Agency from 1967 to 1982.

The tests show a rapid decline in the levels of PCB and DDT in Baltic herring, pike and seabirds since these poisons were banned. The decline is believed to have been simultaneous in the areas studied, with one exception, the southern portion of the Gulf of Bothnia between Oregrund and Gavle, where Baltic herring still contains as much PCB as it did in the early seventies.

"Results from the southern portion of the Gulf of Bothnia are disturbing," said Mats Olsson. "The levels of poison does not make Baltic herring unfit for human consumption, but it could be a threat to the fauna for the longer term. The figures indicate that PCB is still being dumped in the Gulf of Bothnia."

Studies in the Gulf of Bothnia will now be intensified. Finnish authorities will also participate in the effort to determine the cause.

PCB was dumped in the area earlier, but researchers do not consider it very likely that these dumpings would affect the test results.

Since 1971 the use of PCB has been very limited in Sweden. Many countries restricted the use of PCB during the early seventies.

Several countries banned the use of DDT between 1969 and 1972. Sweden, however, allowed pine-tree seedlings to be dipped in DDT up until 1975.

Effective

The National Museum of Natural History began to collect fish and seabird eggs in 1967 in order to study the effect of the environmental poisons DDT and PCB. The levels of poison provided a good picture of the pollution situation in rivers, lakes and in the Baltic.

Studies indicate that restrictions against DDT and PCB have been effective. Levels of these poisons have declined in all the materials studied and the decline seems to have been simultaneous in the various environments. The level of PCB declined in lakes since the early seventies, while the decline in tests from the Gulf of Bothnia and the Baltic as a whole began to appear in the late seventies.

"The Baltic has recovered more quickly than the gloomy predictions gave reason to suspect," said Mats Olsson. "However, the PCB situation in the southern portion of the Gulf of Bothnia is an exception."

When this environmental study is submitted to the Gulf of Bothnia Committee in Sundsvall next Wednesday, representatives from Finland may complement the positive Swedish reports by announcing that there is now an increased effort on the part of the sea eagle to propagate again in northern Kvarken.

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SWEDEN CONTRIBUTING TO UN STUDY OF THIRD-WORLD ENVIRONMENT

Stockholm DAGENS NYHETER in Swedish 14 Feb 83 p 7

[Article by Anders Johansson: "Extra Swedish Aid; 7.5 Million Kroner for Survey of Developing Nations' Environmental Problems"]

[Text] Nairobi, Sunday--Sweden has promised extra aid amounting to 1 million dollars, the equivalent of 7.5 million Kroner, to the UN environmental agency UNEP [UN Environment Program], to be used for surveying the serious environmental problems in a number of third-world countries.

Cecilia Nettelbrandt, Swedish ambassador to Nairobi and also a representative to UNEP, which has its headquarters in the Kenyan capital, will sign an agreement for the extra aid on Monday. UNEP will be represented at the signing by its managing director, Dr Nostafa Tolba.

Sweden's regular annual contribution to the UN environmental agency is about 6 million dollars, or about 45 million Kronor.

The extra contribution will be used to initiate an experimental program for the purpose of treating serious, long-term environmental problems in the third world in a comprehensive manner.

The program will be concentrated to desert expansion, forest devastation, soil destruction and water problems in the third world. In the discussions within UNEP Sweden has pointed out the necessity of treating these serious problems from a comprehensive viewpoint, which includes conservation of the environment as well as general economic and social development in the developing countries.

Holland Also Gives Extra Money

Holland will also give an extra contribution of 1 million dollars to UNEP, but that is to be used for technical assistance for already identified environmental problems in the third world. The FRG is making technicians, equipment etc. available for this purpose.

Of the original 118 developing nations 12 have been selected for the "Swedish" experimental program: three in Latin America (Colombia, Jamaica and Peru), three in Asia and the Pacific Ocean (Bangladesh, Indonesia and Papua-New

Guinea), four in Africa (Botswana, the Ivory Coast, Kenya and Morocco) and two in the Middle East (Jordan and Oman).

Two Project Packages for Each Country

The UNEP delegation will visit all of these 12 nations during the spring in order to identify environmental problems and study the willingness and ability of their respective governments to carry out potential assistance programs. Four nations will then be selected for visits this fall by expert groups, which will work out two project packages for each country.

In about a year UNEP will then function as a "broker" and help the selected developing nations to find financial backing for the environmental projects. UNEP is hoping that among others UNDP, the World Bank, the World Food Program, the International Labour Office and the World Health Organization will be involved.

If Sweden is to participate in the future in any of the project packages it is likely to be in developing nations which are already so-called program nations for aid, which in this connection means Bangladesh, Botswana and Kenya. Among the nations in reserve on the UNEP's list may be mentioned Tanzania, Zimbabwe and Lesotho, among others, where the development agency Sida [Swedish International Development Agency] is also active.

QUEENSLAND CONSERVATIONISTS GIRD TO BATTLE GOVERNMENT

Brisbane THE COURIER-MAIL in English 1 Jan 83 p 2

[Article by Bill Ord]

[Text] If the Premier, Mr Bjelke-Petersen and his Ministers thought the conservationists gave them "curry" in the last 12 months, it is nothing to what the Government can expect in the next 12 months.

Last year may well prove to have been little more than teething time for the young, tough, dedicated and increasingly skilled professionals who speak for Queensland's major environmental action groups.

This year, the likes of the Queensland Conservation Council's Ms Liz Bourne and the Wildlife Preservation Society's Mr Don Henry are determined to sink even sharper teeth into every government policy and action which does not square with what they consider to be sound environmental philosophy and action.

And, with equally young and tough allies like the Rainforest Protection Society's Ms Aila Keto, the Australian Conservation Foundation's Mr David Allworth and the Littoral Society's Mr Eddie Hegerl, they are not going to let go until they win their war, which they admit will be long and bitter.

This war is against what they would describe, at best, as ecological insensitivity or, at worst, environmental stupidity, which is as dangerous to man's present and future physical, intellectual and emotional well-being as it is unknowing or uncaring about the land and life forms without which that well-being cannot be fully achieved.

The conservationists have set their sights on government — federal, state and local — because they believe it is government which makes or allows the ground rules and circumstances which determine whether cupidity,

stupidity or common sense will eventually win the battle for the environment.

They feel that, although immense efforts still have to be made to win more hearts and minds, the general public is pretty much aware of and largely sympathetic towards the environmental thesis.

Now the politicians must be made or persuaded to fall in line with public opinion, even if, for no better reason, it will be the smart political thing to do.

Meantime, Queensland conservation groups and their leaders have scored some impressive recent victories.

Their nominations include:

- An increase in favorable public awareness of broad conservation issues and support for local actions to preserve the natural environment.

- The federal-state declaration of the Cairns section of the Great Barrier Reef as a marine park over Mr Bjelke-Petersen's objections, and the Premier's recent about-face statement that he favored declaration of the rest of the Reef by the end of 1983.

- What amounted, in a Brisbane Mining Warden's Court hearing, to a completely new, and very public, examination of the wisdom of proposals to sand-mine Moreton Island, as a result of which the conservationists are convinced that, if the State Government does not block mining, the Federal Government will.

GOVERNMENT PLAN WOULD IMPOSE FINANCIAL PENALTIES ON POLLUTERS

Canberra THE AUSTRALIAN in English 22 Dec 82 p 26

[Article by Laura Veltman]

[Text]

THE "polluter-pays" principle, using taxation and other financial penalties against those who damage the environment, is recommended by a conservation strategy released yesterday by the Federal Government.

The Minister for Home Affairs and Environment, Mr McVeigh, announced that the Draft National Conservation Strategy for Australia had been compiled and was to be presented at a conference to be held in Canberra during February 1983.

The draft strategy is designed to be the basis of a plan for "living resource conservation for sustainable development" to be finalised at the conference and endorsed by governments, industry, commerce and community groups by mid-1983.

The draft includes background papers on co-ordinated legislative measures which Australian federal, State and local governments should take to ensure the use of living resources on which development is based can be sustained in perpetuity while enabling development to satisfy the reasonable needs and aspirations of society.

Incentives

Among the financial measures it says would achieve this goal are the imposition of taxes to discourage activities which do not promote sustainable resources management.

"For example, the polluter can be charged a tax relating to the output of a pollutant and to the cost of cleaning up," the draft strategy says.

But it also recognises that financial incentives can be provided to encourage conservation.

"The farmer who conserves soil can be given either subsidised credit or a tax concession," it says.

"Plant investment allowances or rapid depreciation provisions can also encourage environmentally benign products and processes."

The draft also says international conventions and agreements on conservation to which Australia is a signatory should be supported by adequate resources and administrative arrangements to give them effect.

NSW PLANS SEEK TO AVOID ERRORS OF GOLD COAST DEVELOPMENT

Sydney THE SYDNEY MORNING HERALD in English 22 Dec 82 p 2

[Article by Joseph Glascott]

[Text] Planning guidelines to prevent a string of Gold Coast-style concrete jungles along the NSW coast were issued yesterday by the Minister for Planning and Environment, Mr Bedford.

The guidelines have their genesis in the report of the two-man commission of inquiry the State Government appointed this year to hear arguments for and against high-rise projects the local council unexpectedly approved at Tweed Heads, just across the border from the Queensland coast.

Now the Minister has asked NSW coastal councils to adopt the guidelines to restrict random development of high-rise units along the coast.

"There is no doubt that a demand exists for high-rise developments in resort areas like the NSW North Coast," Mr Bedford said. "However, environmental factors such as overshadowing, the overlooking of views and visual quality must be considered if we are to avoid what has happened in Queensland."

In their report the commissioners said the Tweed Gardens twin-tower home unit project now under construction and the Seascape home unit project at Tweed Heads were too high.

The report went on to propose a method for councils to follow in determining the sites and heights of buildings in sensitive areas.

This method as illustrated in the accompanying diagram (such as Razorback Mountain) to the coastline and suggests that buildings be kept below that line. The diagram shows details peculiar to the Tweed Heads area, but the principles apply generally.

Mr Bedford said the guideline system would discourage development of any kind on coastal headlands.

The policy has been suggested as a voluntary code for councils, but if local councils allowed undue high-rise developments, he had the power to intervene under the Planning Act, he warned.

Under the powers, Mr Bedford took control earlier this year of all buildings above three storeys in Tweed Shire.

He is now negotiating with the council to lift these controls.

Releasing the commissioner's report, Mr Bedford said yesterday, "The sheer beauty of most of our coastal towns is their main tourist attraction. If that is destroyed they will have little to offer."

CS0: 5000 7541

RADIOACTIVE SAND PUTS STOP TO GOLD COAST DEVELOPMENT

Brisbane THE COURIER-MAIL in English 20 Dec 82 p 1

[Article by Breet Free]

[Text]

SOUTHPORT.— The Gold Coast City Council has ordered a halt to Southport development because of a radioactive sand scare.

The halt was ordered two weeks ago after State Health Department investigations found radioactive sand levels above the acceptable limit.

According to a senior council officer, the Gold Coast City Council is awaiting word from the Health Department what line of action to take.

The council resolved on December 10: "That no further development or filling of land be undertaken until a satisfactory clearance from the State Health Department has been provided to the council and the applicants and owners of the land be advised accordingly."

It is believed the land, which will be used for a housing development, was once a dumping point for a mineral sand mining company. The sand tailings are now under tonnes of earth fill and topsoil.

The land being tested is about .5 ha and fronts on to Ferry Road near Deauville Avenue. It is diagonally opposite The Southport School.

The council health committee chairman, Ald. John Laws, said yesterday the Health Department was continuing its tests and the council would make a further development decision when test results were received.

"But while we are waiting we can't allow any more development," Ald. Laws said. "The sand was put there many years ago and it has nothing to do with developers."

"I can recall seeing large, black mounds of sand being dumped there when I was younger."

DUTCH INCINERATOR SHIP ARRIVES TO PICK UP TOXIC WASTES

Melbourne Cargo

Melbourne THE AGE in English 21 Dec 82 p 5

[Article by Rosslyn Beeby]

[Text]

A Dutch incinerator ship, the *Vulcanus*, sailed into Melbourne yesterday to collect a highly toxic cargo that had been waiting for more than seven years.

The *Vulcanus*, which has a crew of 19, is painted a conspicuous and warning yellow from stem to stern. It travels the world loading and burning poisonous industrial wastes at sea. It was brought to Melbourne for the second stop in its first Australian visit by the chemists' firm BF Goodrich to dispose of 1700 tonnes of liquid hydrocarbon wastes.

The ship called at Sydney earlier this month to collect and burn 3200 tonnes of liquid waste from ICI Australia Ltd.

A technical manager with Goodrich, Mr Norman Gamble, said the waste would be pumped directly on to the ship from two storage tanks at Coode Island, near the ship's berth at Maryborough wharf. The hydrocarbon wastes, a by-product of PVC manufacture, had been stored in licensed tanks for more than seven years.

It would take 24 hours to load the wastes, which would be incinerated at sea while the ship

steamed continuously in a 25-mile radius in an area approved by the Department of Home Affairs and Environment. The exact location could not be revealed but it was 200 miles offshore near Mallacoota, or "half way between Sydney and Melbourne," Mr Gamble said.

The wastes will be burnt in two furnaces at the ship's stern,

which are heated with normal fuel to 1200 degrees. The liquid waste is injected into the flames, and burnt continuously for three days. Chemical by-products of the incineration of PVC wastes are carbon dioxide, water and hydrogen chloride, which together form hydrochloric acid.

Loading of the PVC wastes will be monitored by the Environment Protection Authority, and an EPA air quality officer will travel with the ship for eight days to supervise the incineration.

Mr Gamble said scientific tests had proven marine incineration was the safest, least environmentally damaging way of disposing of intractable waste.

Goodrich had paid "well into the hundreds of thousands of dollars" for the ship's visit.

Queensland Chemicals

Brisbane THE COURIER-MAIL in English 29 Dec 82 p 9

[Text]

THE South East Queensland Electricity Board has contracted to have its lethal chemical waste, polychlorinated biphenyls (PCB), disposed of by the incineration ship Vulcanus.

It is planned to transfer the chemical to the ship which is due in Brisbane early next month.

The Vulcanus, labelled by some conservationists the "Ship of Shame", collects dangerous chemicals throughout the world and incinerates them at sea at extremely high temperatures. It then dumps the remains in the Gulf of Mexico.

The SEQEB general manager, Mr Bob Waldie, said the chemical, previously used in some electrical distribu-

tion equipment, had been stored in a maximum safety and security warehouse at Darra where it was checked regularly.

The storage was done with the co-operation of environmental authorities and the unions pending the safest and most effective method of disposal.

"The Vulcanus has disposed of PCBs held by companies in the United States on two previous occasions under the supervision of the Environmental Protection Agency.

"With union support and understanding, the contract will represent a major step towards disposing PCBs inherited when SEQEB took over the responsibilities for electricity distribution in the Brisbane metropolitan area," Mr Waldie said.

Victorian Waste in Brisbane

Melbourne THE AGE in English 31 Dec 82 p 5

[Article by Philip Chubb]

[Text]

The Environment Protection Authority has co-ordinated the transfer of potentially dangerous to an incinerator ship off Brisbane.

The wastes are polychlorinated biphenyls, the fluids used inside transformers and electrical equipment.

The Minister for Conservation, Mr Walker, said yesterday that 53 tonnes of the chemicals were stored in drums around the State and 23 tonnes were trucked to Brisbane on Tuesday.

Wilson Electric Transformers had 16 tonnes of the waste and Union Carbide, seven tonnes.

Mr Walker said the wastes were a potential environmental threat. "They have been stored in drums and there is always the danger of the drums leaking or exploding in a fire. If the wastes escape they would be in the environment for a very long time," he said.

Mr Walker said the only safe way of disposing of the wastes

was through incineration.

He said they had been moved to Brisbane by semitrailer and accompanying safety vehicles. They were expected to arrive yesterday and would be immediately loaded on to the ship.

The Department of Home Affairs and Environment has issued a permit for the ship to dispose of the wastes. It will go offshore to burn up to 200 tonnes, from Victoria, Tasmania and Queensland.

Mr Walker said the ACTU and conservation groups had agreed to the move. The chemicals had been loaded under the supervision of the Department of Minerals and Energy, and escorted from Melbourne by the police and fire brigade.

Mr Walker said: "These wastes have been lying around the State for up to seven years and the EPA has worked for two years to organise their shift. I am delighted that we have been able to deal with the wastes in such an acceptable way and I congratulate the EPA for their perseverance in making sure all details were taken care of."

TASMANIA'S GRAY DEFIES CANBERRA, VOWS USE OF RESOURCES

Sydney THE SYDNEY MORNING HERALD in English 17 Dec 82 p 2

[Text]

Tasmania reserves the right to mine and log the State's wilderness area, the Premier, Mr Gray, said yesterday.

He said the wilderness was worth thousands of millions of dollars to Tasmania's economy, and he rejected any Federal compensation in exchange for abandoning the Gordon-below-Franklin power project.

He said no amount of money could compensate for the power, mineral and forestry resources of the wilderness. The Tasmanian ALP leader, Mr Wriedt, said the ALP supported Mr Gray.

Mr Gray's comments have failed to draw the Home Affairs and Environment Minister, Mr McVeigh, who said yesterday it would be "absolutely wrong" of him to indicate the Commonwealth's position before talking to a sovereign State Government.

Mr Gray's comments follow reports that the Federal Government is preparing for more talks with his Government on the possibility of saving the area.

It is understood the talks centre around a compromise, with the Federal Government offering financial aid if alternatives to the hydro-electricity project can be found.

In a ministerial statement, Mr Gray told State Parliament the listing of the area by the World Heritage Committee acknowledged the construction of the dam could continue.

He said the control of the south-west region remained in the hands of his Government.

"The right to govern and make land use decisions for all of the State has been the sovereign right of the Tasmanian Government and Tasmanian Parliament since Federation," he said.

"My Government would not contemplate any action, nor recognise or accept any outside decision that would lead to a diminution of those rights."

Mr Gray said the Commonwealth recognised Tasmania's ownership of the area. However,

he would consult with the Federal Government on a management plan for the south-west.

Mr Gray said that the people trying to blockade the Franklin dam site were "extremists" who lived in "exclusive little colonies

of dropouts that exist around the place."

Senior Federal Government ministers, including the Acting Prime Minister, Mr Anthony, are expected to meet Mr Gray next week.

Police arrested yesterday the Tasmanian Wilderness Society's director, Dr Bob Brown, on Hydro-Electric Commission property on the Gordon River.

One hundred and forty people have now been arrested and charged with trespassing since conservationists began their blockade on Tuesday.

Tomorrow 50 people will move to obstruct works on the Kelly Basin Road. A vigil camp would stay on the river.

PROS, CONS OF TOURIST SITES ON ABROLHOS ISLANDS DEBATED

Perth THE WEST AUSTRALIAN in English 20 Dec 82 p 3

[Text]

A GOVERNMENT-appointed committee does not favour building tourist facilities at this stage on the Abrolhos Islands, 60km off Geraldton.

It says that, because of the ecological, economic and historical significance of the islands and incomplete information about their fragile environment, building of tourist facilities would be premature.

It suggests the establishment of a single authority, along the lines of the Great Barrier Reef Marine Park Authority, to develop a long-term management plan for the islands.

The authority would protect the environment and valuable historic and economic features.

The crayfishing industry at the islands is a major export earner for WA and Abrolhos waters contain many important precolonial and post colonial shipwrecks.

The islands have unique fauna and are a haven for thousands of sea and land birds. They shelter the biggest seabird breeding sites off the WA coast.

The Geraldton mid-west regional development committee, headed by Mr Ian Johnston, was asked to examine possible development options for the islands after previous proposals met conflicting views from the tourist and fishing industries.

Limited

Under present management as an A class reserve, the Abrolhos have limited public access.

Conservation interests and the fishing industry would generally like to see the islands remain under the closed system. The tourist industry and

others think that access is unduly restricted.

The Minister for Tourism, Mr MacKinnon, will put a submission to the Cabinet today, based on the report.

The committee received 26 submissions of which 31 per cent opposed the islands being opened to tourism. Several thought that there should be stricter controls on fishermen using the islands.

Sixty-two per cent of submissions advocated some kind of tourism, but only 19 per cent said that this should be shore-based activity.

All submissions saw the need for close management and conservation.

The report said that 10 Government author

ities and quasi-authorities now managed the Abrolhos.

It said that the Great Barrier Reef provided an excellent opportunity to observe the operation of one management strategy of a big natural resource with multi-purpose patterns.

The committee recommended Government support for a continuing research programme at the Abrolhos.

There should be stricter controls on present use of the islands till a long-term management plan was decided.

The report said that a tourist camp was established on Pelsart Island in 1947 but the venture failed within a year because of organisation problems, and legislation had prevented shore-based tourism since then.

Under the Fisheries Act, professional crayfishermen were allowed access to the islands at all times and residency during the crayfishing season there from March 15 to June 30.

About 250 crayfishing boats operated at the Abrolhos in season.

CANEFIELD CHEMICALS MAY BE POISONING BARRIER REEF

Sydney THE SYDNEY MORNING HERALD in English 18 Dec 82 p 3

[Article by Andrew Stone]

[Text]

BRISBANE. — Eroded soils and agricultural chemicals from north Queensland sugarcane fields are posing a new threat to the Great Barrier Reef, according to scientists.

The long-lasting pesticide Lindane, widely used by cane growers, has shown up in reef marine organisms and fish. Lindane has been linked with blood and marrow disorders in humans.

Little work has been done to determine its effects in the sensitive reef environment, but some researchers and conservation groups believe it should be more closely investigated.

Mr Greg Miller, a senior teaching fellow in environmental chemistry at Griffith University in Brisbane, said reefs off north Queensland canals were extremely vulnerable to pollution by chemicals and silt.

"The big rivers of the north have been carrying silt out to sea for centuries, but now we're seeing vast increases in sediment loads because of intensive land use for sugar cane," he said.

"In Hawaii and New Caledonia this form of tropical marine pollution has had a devastating effect on coral.

"We don't know what is happening to the reef because it's not being looked at. But the time is very near to look at land use controls and the application of pesticides in the cane industry."

The north Queensland cane lands cover 125,000 hectares of wet tropical coast from Ingham to Mossman, where the reef is closest to the coast. About 2,000 growers produce cane worth \$300 million.

Mr Eddie Hegerl, director of the Australian Littoral Society, a conservation group, said: "The problems of silt and chemicals are ones of water quality, and water quality is critical to protect and sustain the Barrier Reef."

"The issue is not one that conservationists can solve. It is up to the cane industry."

According to a soil conservator, Mr Michael Capelin, about 10 per cent of the region has been degraded from soil erosion and fertility loss.

Most damaged areas lose up to 100 tonnes a hectare of topsoil a year, washed into creeks and rivers by heavy rains.

DROUGHT TAKES TOLL OF WHEAT HARVEST, SPREADS IN NSW

Wheat Crop Loss

Melbourne THE AGE in English 29 Dec 82 p 1

[Article by Carol Sides]

[Text]

Drought has cost Australia more than half its wheat crop, with the abnormally low harvest almost complete.

Victoria is expected to harvest only about 300,000 tonnes of wheat, compared with 2.7 million in the 1961-82 season.

Nationally the wheat harvest, which last year was 15.6 million tonnes has been reduced to 7.6 million tonnes, the lowest in more than 40 years.

The Grain Elevators Board has projected an operating loss of at least \$16 million—the largest in its history as a result of the drought.

Fewer than one-third of Victoria's grain silos were opened by the Grain Elevators Board to cope with this season's harvest. The board has reduced its capital and operational budgets by more than \$25 million to try to cut costs.

A drought seed supply scheme, started by the Victorian Department of Agriculture, the Victorian Farmers and Graziers' Association, the Australian Wheat Board and the Australian Barley Board, has organised the inspection of more than 200 wheat, barley and oats crops to ensure sufficient seed for the 1983 crops.

Seed recovery has been better than expected in some areas, despite rainfall down to 10 per cent of normal. In the Mallee, farmers are expected to have to import oats and field peas from other districts to plant next season's crops.

A vice-president of the VFGA, Mr Frank Drum, said it had been a disastrous harvest in the Wimmera. Many crops had failed completely but even in the better paddocks where farmers had hoped to harvest up to six bags an acre they had reaped only three or four.

"Virtually all most farmers can hope for is to get their seed returned," Mr Drum said. "The only income this year is what farmers can borrow against their assets. It will mean a heavy borrowing programme."

He said barley and peas were scarce in Victoria due to failed crops. Peas were bringing up to \$300 a tonne compared with about \$130 a tonne last season.

Intensive farming of chickens, turkeys and pigs would become increasingly expensive as a result, leading to increased consumer prices eventually.

Impact in New South Wales

Sydney THE SYDNEY MORNING HERALD in English 30 Dec 81 p 3

[Article by Mike Steketeer]

[Text]

Regions around Moss Vale, Maitland and Moree have joined the State's drought-declared areas, leaving only the coastal strip north of Port Stephens free from the most dry conditions in recorded history in NSW.

The Minister for Agriculture, Mr Hallam, announced yesterday that a record 53 of the 58 Pasture Protection Boards had been drought-declared for January.

This meant 95 per cent of the State's rural producing areas were stricken by drought.

The severity of the drought is emphasised by the fact that, during the serious drought from 1965 to 1968, the declared areas reached a maximum of 46.

The Moree and Moss Vale areas, previously partly declared, are now fully declared drought areas and the whole of the Maitland region has joined the list.

Since April, the northern and southern wheat belts have experienced the driest periods in recorded history, which goes back 12 years.

Mr Hallam estimated yesterday that the total overall loss to the NSW economy from the drought was \$3 billion, with the real net value of farm income falling 72 per cent in 1982-83.

He said NSW is now in its 45th successive month of drought, with the situation having worsened in December because of continued high temperatures and the lack of useful rain.

The yield of 1.4 million tonnes from the wheat crop was the lowest since 1965.

The Grain Handling Authority and State Rail Authority faces a loss of \$160 million because of the poor wheat crop.

Some districts had not been able to produce crops for the past four years.

Returns for beef producers could fall because of low slaughter weight, the reduced number of saleable cattle and poor quality beef.

Mr Hallam attacked the National Party for trying to make a political issue of the drought.

He singled out a call by the party's spokesman on water resources, Mr Ian Armstrong, for the Government to provide \$2 million immediately for water for drought-stricken stock and a claim by the member for Murray, Mr Tim Fischer, that the Water Resources Commission had miscalculated the amount of storage water needed for rice, fruit and vegetable growers in the Murray Valley.

A spokesman for Mr Hallam said this year's Budget had provided for full reimbursement of the cost of sinking bores for stock water.

The spokesman said the Water Resources Commission had announced several months ago the allocations for the current crop year—40 per cent of the normal amount for the Lachlan, 85 per cent for the Murray Valley and 100 per cent for the Murrumbidgee.

These figures had not changed but in some areas the rate at which the allocation was released had been reduced. Growers would receive the same amount of water over the crop year as promised when the commission had announced its allocations.

The Government had paid out more than \$117 million in release schemes to primary producers during the current drought — \$15.5 million of it since July.

If the drought continued into the new year, these payments could double.

In a separate statement Mr Hallam said the risk of damage to drought-affected land from erosion was the highest this century.

He said the high intensity rainfall which came with summer storms did nothing to break the drought but could cause serious soil erosion.

The Soil Conservation Service of NSW is giving warnings about the danger and telling farmers how to minimise soil loss.

BRIEFS

REEF ISLAND PROTECTION--A Queensland conservation group has begun a campaign to force the P and O tourist group to relinquish a development lease it holds for a tiny Great Barrier Reef island. The Queensland Cabinet last month granted Heron Island Pty Ltd, a P and O subsidiary, a 30-year lease over half the 4.9 hectare Wilson Island, a coral cay 90km off Gladstone. The decision was taken without consulting the Great Barrier Reef Marine Park Authority, the Federal body set up to manage the Reef. Mr John Sinclair, president of the Wildlife Preservation Society of Queensland said yesterday the society would urge a boycott of the travel group and appeal directly to its headquarters in London. He said conservationists feared development of the island would upset its fragile ecology and pose a serious threat to a roseate tern rookery. The Marine Park Authority lists Wilson Island among the 10 most important sea bird nesting sites on the Reef. Mr Sinclair, who was a key figure in the battle against sand mining on Fraser Island during the 1970s, said: "The roseate tern is very attractive and extremely sensitive to any form of disturbance from humans approaching within 50 metres. Despite this knowledge, P and O seems determined to drive the colony into oblivion. Mr Leon Wruck, chairman of Heron Island said the company planned a low-key development which would protect the island's wildlife and natural resources. [Text] [Sydney THE SYDNEY MORNING HERALD in English 22 Dec 82 p 9]

TOXIC WASTE PROBLEM--Efforts to transport stores of lethal chemical waste in WA for disposal in the Eastern States have failed. It is believed that more than 100 tonnes of polychlorinated biphenyls--used in transformers and capacitors in electricity generation--are in storage in WA with no means of disposal. The waste disposal company Cleanaway has brought the incinerator ship Vulcanus to Brisbane to burn toxic waste from Queensland, Victoria and Tasmania off the coast. The WA Commissioner for Public Health, Dr A. McSally, said yesterday that transactions had fallen through between Cleanaway and WA companies owning the waste. His Department had been involved in making arrangements to transport the material to Brisbane. [Text] [Perth THE WEST AUSTRALIAN in English 31 Dec 82 p 4]

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AMMONIA-UREA PLANT EFFLUENT DISPOSAL SYSTEM INADEQUATE

Energy Minister's Statement

Auckland THE NEW ZEALAND HERALD in English 28 Dec 82 p 2

[Text]

The Minister of Energy, Mr Birch, says the ammonia-urea plant at Kapuni may again produce more effluent than its disposal systems can handle.

But he added: "They have got to develop systems which allow them to cope without damaging the environment."

"It may mean slowing down commissioning of the plant, but that is speculation at this stage."

Marine life along 300 metres of the south Taranaki coast was killed recently by the dumping of 40 tanker loads of effluent

from the \$112 million plant.

Mr Birch wants a preliminary report on the dumping from the plant owners, Petrochem, by this week.

Make Public

The minister expects a full report — explaining how the dumping happened, who authorised it, and what disciplinary action will be taken — next week.

He has yet to decide whether to make the report public.

"But I am more anxious to get details of a management plan to ensure that this will not happen again," he said.

The plant had complex disposal systems, including effluent ponds and spraying on nearby land bought for the purpose, but those systems had proved inadequate.

Unforeseen

The ammonia-urea plant was likely to continue producing excess effluent until it was running satisfactorily, said Mr Birch. There was little control of the quantity of effluent produced.

The present disposal systems were adequate when the plant was functioning normally, and there might not be further problems.

but the plant would have to be equipped for "unforeseen contingencies."

Mr Birch added that the plant operators needed to be able to "take decisions at management level in consultation with the authorities."

The general manager of Petrochem, Mr C. J. Pope, had said that effluent had been sold to local farmers as a form of fertiliser.

Mr Birch said such sales could solve the disposal problem, but as "an off-specifications product" the effluent would have to be applied very carefully.

Illegal Dumping Probed

Auckland THE NEW ZEALAND HERALD in English 30 Dec 82 p 1

[Excerpts]

A catchment commission officer is believed to have been told about the disposal of urea effluent at a South Taranaki beach a week before anything was done about the illegal dumping.

The Herald was told that a staff member of Petrochem's \$112 million ammonia-urea plant at Kapuni discussed the dumping with a Taranaki Catchment Commission officer at the plant on Wednesday, December 15.

It appears the commission's senior officials did

not learn of the dumping until nearly a week later, by which time marine life along 300 metres of foreshore near Mania had been killed by the effluent.

Water Right

Although Petrochem did not seek the water right it needed by law to dump the effluent, the state-owned

company is now likely to claim in its defence that at least it told the catchment commission.

The commission manager, Mr John Douglas, confirmed last night that one of his staff had been told about the dumping when visiting the ammonia-urea plant on December 15.

General Terms

"They mentioned to one of our staff that they might do it," Mr Douglas said.

"It was a discussion in very general terms, at very low levels."

Second Time

"They certainly should have applied for a water right to do it and if they had asked for one they would not have got author-

ity for the concentrations that were dumped there."

He said the commission would probably decide at its meeting in mid-February whether Petrochem would be prosecuted for the dumping, which is the second time in two months that major pollution has been caused by effluent from the recently opened plant.

In October, 20 kilometres of the Kapuni Stream was

laid waste by effluent from the plant, which is one of the Government's "think big" projects and is designed to convert Maui gas to urea fertiliser.

Mr Douglas said pollution from the ammonia-urea plant and a recent caustic soda spill at a dairy company at Opunake highlighted the need for giving catchment commissions better control over waste disposal.

With other projects, such as the methanol and synthetic petrol plants now being built in Taranaki, there was a need for adequate plans for serious chemical spills and tighter laws governing waste disposal systems.

Mr Douglas said he would ask the commission to consider changes in the law, including bigger fines for offenders.

CSO: 5000/9087

MINISTER DENIES OPENCAST COAL MINE THREATENS ENVIRONMENT

Auckland THE NEW ZEALAND HERALD in English 7 Jan 83 p 10

[Excerpts]

Critics of the proposed Ohinewai open-cast coalmine overlook today's stringent environmental standards, says the Minister of Energy, Mr Birch.

Nobody could pick and choose where coal was found, the minister said in an interview, and there was no alternative to mining coal where it lay in the ground.

But the question of Ohinewai turning into another Clutha dams controversy or becoming a mini-Ruhr did not arise because there was no comparison.

"We have no alternative but to use the coal where it is and to say to the coal industry that it is going to have to maintain standards that are environmentally acceptable today.

"What is being overlooked is that standards today are very much higher than in the past. You do not get consents today to pollute."

Alarm

Farmers around Ohinewai, a small Waikato town-

ship just north of Huntly, have voiced alarm at proposals by the mines division of the Ministry of Energy to greatly expand the size of a planned open-cast coalmine.

The division is looking at doubling the proposed capacity to a million tonnes a year and there have been suggestions, not rejected by Mr Birch, that new "super-fast-track" planning legislation under study by the Government may be used to get the mine working.

A Wellington energy researcher, Molly Melhuish, has predicted that Ohinewai will be the Clutha controversy of the next few years, and the Federated Farmers has claimed that unchecked development would turn the area into a mini-Ruhr.

Extravagance

Ohinewai will be New Zealand's biggest coalmine,

but Mr Birch says mines in the German Ruhr industrial region produce up to 50 million tonnes of coal annually and some are up to five kilometres wide, so Ohinewai would be only a fraction of their size.

"I think it is extreme extravagance to say it has elements of a Clyde dam controversy. People can create those controversies if they try hard enough, and I am not discounting the fact that there will be many people who will prefer not to see the coal-mining proceed.

"You really have got to mine coal where it is and where it can be produced economically. Otherwise you are imposing penalties on the economy and if you keep doing that, you will simply put New Zealand out of business."

CONSERVATIONISTS DECRY PROPOSED NATIVE TIMBER LOGGING

Auckland THE NEW ZEALAND HERALD in English 21 Jan 83 p 1

[Text]

A Forest Service plan for the Kaimai-Mamaku Forest Park rules out large-scale felling of native timber but leaves the way open for limited logging of kauri, rimu and tawa.

The plan, published this week, has already drawn fire from conservationists who claim it fails to reflect widespread public opposition to the logging of native timber.

The forest park, stretching 70 kilometres between Paeroa and Rotorua, contains areas of both native and exotic forest.

Guidelines for its management over the next 10 years are proposed in the draft plan, which is open for public submissions until April 22.

Replanted

The plan says some kauri stands will be set aside as forest sanctuaries, but it allows for periodic thinning of other kauri stands, mature trees excluded.

A pine plantation will be logged and replanted mostly in kauri.

The plan avoids an immediate decision on the future of substantial volumes of tawa in the

forest park, but says demand for the native hardwood will increase as supplies elsewhere dwindle.

"Responsible management does not mean that these resources are to be locked up, unable to be utilised for society's future needs," it says.

"At the same time, tawa-dominated forest has significant recreational use and aesthetic appeal."

"Research-scale" logging of tawa would be allowed, but the public would be consulted before any other felling of the trees.

The plan makes similar provisions for rimu, but with no mention of research logging.

The director of the Joint Campaign on Native For-

ests, Mr Guy Salmon, said yesterday that the Forest Service was going against public opinion in keeping open the option for native timber logging.

Major Battle

The overwhelming majority of public submissions on the previous Kaimai-Mamaku plan in 1976 had opposed the logging of native trees, he said.

The campaign would press to have the forest park rezoned as a reserve or a protected forest. Campaign members would meet at Tauranga in April to focus attention on the forest park.

"I think it will be our major battle this year," said Mr Salmon.

PHILIPPINES TO JOIN CAMPAIGN AGAINST N-WASTE DUMPING

Rangoon THE WORKING PEOPLE'S DAILY in English 3 Feb 83 p 6

[Text]

MANILA, 1 Feb—The Philippines will join the South Pacific Forum countries in seeking a stop to the dumping of nuclear waste in the Pacific, President Ferdinand Marcos said today.

The move was in response to the appeal of Nauru and Kiribati Islands which are leading the campaign to ban the dumping of nuclear waste specially in areas around countries in the Pacific basin, a Malacanang Palace statement said.

Nauru President Hammer Deroburt said during his meeting with Marcos that the danger to the ocean ecology and the people of the South Pacific of such nuclear waste dumping is patent and clear.

The issue will be taken up by the meeting opening February 14 in London of the Consultative Committee of the London Anti-Dumping Convention of 1972, under the auspices of the specialized United Nations body Inter - Governmental Maritime Consultative Organization (IGMCO).

NAB, AFP

GERMAN DEMOCRATIC REPUBLIC

INTERNATIONAL COOPERATION NEEDED TO COMBAT POLLUTION

GDR Minister Interviewed

A0081203 East Berlin NEUES DEUTSCHLAND in German 5-6 Feb 83 p 9

[ND interview with Hans Reichelt, deputy chairman, GDR Council of Ministers; GDR minister for environmental protection and water management--date and place not given]

[Excerpts] [Question] Now, air pollution does not stop at the borders. In the past few days the FRG mass media have reported in this connection on certain activities of FRG politicians vis-a-vis the CSSR and the GDR. What is your opinion on that?

[Answer] Certainly, one can proceed from the fact that such activities serve above all propaganda purposes. We take that into consideration, but we are, so to speak far away from any propaganda bustle, ready to cooperate with all interested countries.

On principle, however, one must state first of all that the GDR receives as many air pollutants as it releases in return--but of course, there are certain differences in the balance with individual countries. Joint efforts are, for instance, necessary to prevent further damage to the forests along our state border with the CSSR.

As a result of longer cooperation the governments of the GDR and the CSSR have therefore concluded a government agreement and on this basis have agreed on specific projects to reduce the sulfur dioxide pollution, reduce the emission of malodorous substances, measures to protect and preserve forest areas and measures for scientific-technical cooperation. This is coordinated, controlled and guaranteed by government representatives of both sides.

With these activities the convention on border-crossing air pollution signed at the All-European Environmental Congress in November 1979 is taken into account.

Regarding the effects on the border area of the GDR and the FRG by the Wittenstein Paper Factory, one can say that already in the past 2 years the acute effects were considerably limited by a number of measures and were further reduced.

[Question] Like air, waters too do not stop at the border. Their middle point often even forms the border. What are the main tasks for cooperation here.

[Answer] Here too the GDR government proceeds from the fact that through good neighborly relations it is possible to ensure, in the mutual interest, the utilization and cleanliness of the waters and also efficient measures for flood protection.

For instance since the 1960's the joint tasks as regards the GDR's border waterways with the CSSR and the Polish People's Republic have been settled on the basis of joint government agreements. Government representatives and working groups discuss the many questions together and solve them to the benefit of both sides.

In the last years cooperation with the FRG government has taken a positive direction. Within the framework of the border commission agreements on the constant preservation of border-crossing waterways were concluded. Thus the use of the Icker Dam, being on the territories of both the GDR and FRG, and the use of the Ecker long-distance waterpipes for supplying FRG cities with drinking water was agreed. Also the construction of a new storage basin for flood protection on the Itz on the territory of the FRG by means of the use of GDR territory was settled through an agreement. Proposals for settling further questions concerning the protection of the waters of the Steinhilber were handed over to the FRG government. Joint proposals were also worked out to reduce the water contamination of the Havel and were submitted for decision. As a sign of its good will the GDR government declared its readiness for consultations on questions on the protection of the Elbe.

Here, one also has to remember the water protection agreement concluded with the senate of Berlin (West) recently.

The convention on the protection of the sea environment of the Baltic Sea area, which was signed in 1974 by all seven Baltic Sea states, is proving to be particularly efficient. The GDR tries to conscientiously implement the obligations resulting from this convention. Thus in the catchment area of the GDR the number of contaminants in the rivers that flow into the Baltic Sea have been considerably reduced. A facility to treat ships' waste waters containing oil has started operation in Rostock harbor. Nearly all ships of merchant, fishing and technical [technische] fleet are already equipped with bilge water oil separators and sewage tanks.

[Question] The Western mass media occasionally report on scandals in Germany, that by-products. Is something similar possible here?

[Answer] The harmless elimination of toxic by-products and harmful substances has always been an important concern of the GDR's environmental protection. To solve this task there are about 160 facilities and dumping grounds where these substances are burnt, while to some extent energy is gained, or are disposed in such a way that any damage to the environment is excluded.

The responsible supervisory organs strictly control the operation of all these facilities in order to exclude harmful effects on humans, fauna and flora, air and waters. As a result of this work it has to be stated that in the GDR no problems with toxic waste have appeared as are reported from other countries.

FRG-GDR Cooperation

AU141908 East Berlin NEUES DEUTSCHLAND in German 11 Feb 83 p 5

[ADN report from Bonn: "FRG Government Wishes to Continue Cooperation on Environmental Protection"]

[Text] The FRG government wishes to continue cooperation with the GDR on problems of environmental protection, AP reported. State Secretary Spranger of the Interior Ministry announced that an "exchange of information" on problems of desulfurizing flue gasses will begin this month which is to lead to cooperation in air purification."

PSO: 5000/3008

OIL SPILL PROTOCOL FOR CARIBBEAN HAS IMO SUPPORT

Bridgetown ADVOCATE-NEWS in English 1 Feb 83 p 1

[Text]

The adoption and subsequent entry into force of an oil spill Protocol will provide a legal framework for the development of regional and sub-regional strategies to combat oil pollution in the Caribbean.

So says David Edwards, a representative from the International Maritime Organisation (IMO), attending a five-day workshop on oil spills and shoreline clean-up at the Dover Convention Centre.

In March this year a convention on the protection and development of the marine resources of the Caribbean and a Protocol for co-operation in combatting oil spills in the region will be presented to a conference of plenipotentiaries for adoption.

Mr Edwards told the opening of the workshop that as long as oil is transported along sea routes or extracted from the ocean bottom, there will remain the risk of oil pollution and the environmental and economic consequences.

He described the Caribbean as a relatively high risk area.

According to the IMO official: "The oil spill Protocol specifically recognises that the islands of the region are particularly vulnerable to damage resulting from significant oil pollution owing to the fragility of their economic reliance of certain islands of the region on the continuous utilisation of their coastal zones."

He said it was for that reason that participation in the current workshop was focussed on regional states, its purpose being to provide information on the most effective means of cleaning and restoring beaches affected by oil pollution.

He stated that the workshop was one of the activities incorporated in the Caribbean Action Plan, adopted in Montego Bay, Jamaica in April 1981.

The plan identified as one of its programme priorities the implementation of regional oil spill contingency plans for states stretching from the Bahamas to French Guiana.

BELIZE

FIRM'S TOXIC WASTE KILLS FISH IN CREEK, COASTAL WATERS

Belize City THE BEACON in English 5 Feb 83 pp 1, 10

[Text] Over the weekend, starting on Sunday last, Belize City residents witnessed for the second time in recent years the terrible spectacle of thousands of dead fish floating in the Haulover Creek (which divides Belize City) and in the coastal waters surrounding Belize City. The dead fish include fresh water species as well as marine species and also crabs, shrimp and lobster.

A knowledgeable source told the BEACON that as in the case of the first wholesale poisoning of the fish, the culprit responsible for the current outrageous contamination of the Haulover Creek and hence the sea is a local firm.

According to our source, the company, in the course of its manufacturing process, produces a liquid toxic waste containing a high percentage of a deadly cyanide compound. This waste is collected and stored in cylinders on the company's premises.

However, it was learnt that the toxic waste corroded its containers and a leak developed. In an attempt to absorb the toxic waste, the company dumped sawdust on the leaked toxic waste and afterwards piled the contaminated sawdust in its yard, which borders on the Haulover Creek. The exposed sawdust got wet and the toxic waste which it had absorbed was washed out into the water table (which is very close to the surface in Belize City) and thence to the Haulover Creek itself.

The result of course is that, due to the total lack of regard for rudimentary environmental protection, the fish of the Haulover Creek and the coastal waters of Belize City are once again poisoned.

Apparently no precautionary steps were taken either by the company or the government authorities after the first poisoning. It is to be hoped that after this second outrage, some action will be taken to ensure that there is no repeat of this kind of contamination of the environment--if not by the company on its own initiative then certainly by the Government.

HUGE FOREST FIRE DECLARED DISASTER

FL150045 Bridgetown CANA in English 2343 GMT 14 Feb 83

[Text] Santo Domingo, 14 Feb (CANA-REUTER)--More than 1,000 troops and fire-fighters have brought under control a huge forest fire which had swept through the central mountain range of the Dominican Republic, Presidential Minister Hatuey De Camps said today.

President Salvador Jorge Blanco today flew over the 50 square km (20 square mile) zone affected by the blaze and declared it a disaster area. Last Saturday, shortly before the fire began, he had designated 1983 "Forestry Year."

Meanwhile a spokesman for the U.S. Embassy said special equipment and a team of U.S. experts requested by the Dominican Republic yesterday had arrived to help put out the fire.

The authorities have so far given no word about casualties or damage.

CSO: 4500/2014

EL SALVADOR

BRIEFS

LAKE ILOPANGO CONTAMINATED--Urgent warning. The National Aqueducts and Sewerage Systems Department announces to owners and deliverers of casks of water and also to the inhabitants of Ilopango, Soyapango, and its settlements that, according to chemical-physical-bacteriological analyses, the water of Lake Ilopango contains amounts of boron, arsenic, and other mineral salts that exceed the tolerable specifications for drinking purposes, and therefore warns communities that buy water by the barrel to refrain from doing so from those who transport water that is not actually drinkable. This can be ascertained by the turbidity, taste, and lack of clarity of the water. Drinking contaminated liquids, such as the water that is transported directly from Lake Ilopango, can cause serious health consequences. Drivers and owners of casks or water tank trucks are warned to refrain from obtaining water from the lake in order to sell it as drinking water, since this may cause serious consequences to users. If drivers and owners engage in such a dangerous undertaking, they will be severely penalized. San Salvador, 9 February 1983. [text] [San Salvador LA PRENSA GRAFICA in Spanish 9 Feb 83 p 35] 8255

030: 500012013

CONTROLS URGED ON USE, SALE OF AGRICULTURAL CHEMICALS

Georgetown GUYANA CHRONICLE in English 29 Jan 83 p 4

[Text]

There is need for legislation to control the sale and use of agrochemicals as well as for educational programmes on the dangers of contamination.

This was decided by members of the Society of Professional Agriculturists in Guyana and Government Chief Pathologist, Dr. Leslie Mootoo, on Wednesday night at a SPAG meeting in the Teachers' Association Hall, Woolford Avenue.

It was noted that though prescriptions were needed for certain relatively harmless drugs, there is no regulation governing the purchase and use of agrochemicals, most of which are fatal to humans.

The agriculturists observed that

agriculture field workers often disregard safety procedures when dealing with the chemicals since in many cases the harmful effects of contamination are not immediately apparent, but they come to the fore in later years.

All agreed that both educational programmes and a system of body checks similar to the one used for checking X-ray department workers were needed.

Dr. Mootoo said that the first known cases of agro-chemical poisoning occurred in 1962 when 19 persons died and 64 were hospitalised after eating imported flour. Investigations revealed that this food was stored along with parathion, a deadly organic phosphate on board a ship. He added that over the last five

years he performed autopsies on 343 persons who died from agro-poisoning. Most of these, however, were suicides.

The Chief Pathologist warned that the increased agricultural drive could result in more deaths from agrochemicals. He drew a parallel with this and the fact of increased road deaths with the construction of more and better roads.

Dr. Mootoo further extended his warning to the area of food products. He said that because of the current practice of boarding persons may find it necessary to spray insecticides to keep away insects. This practice can be dangerous, he said, if carried out by untrained and inexperienced persons.

ENVIRONMENTALISTS URGE REAPPRAISAL OF DAMS POLICY

Calcutta THE STATESMAN in English 18 Jan 83 p 13

[Text] New Delhi, Jan 17--Growing pressure from environmental groups is forcing the Government to reappraise its policy to build more and bigger dams, reports PTI.

It has already built 1,554 large dams and many small and medium dams at a cost of more than Rs 10,000 crores and another 200 hydro-electricity projects are either underway or planned.

For a country heavily dependent on oil imports, the temptation to harness rivers is almost irresistible, but with sites in the outer Himalayas now more or less exhausted, the country's dam builders are moving deep into the Himalayan interior where the ecological system is extremely fragile, causing concern among environmentalists.

A local movement opposing construction of the 480 MW Irayag project has drawn attention to the ecological dangers it poses.

Concerned by the growing criticism of large dams, India's Planning Commission has recently set up three working groups to revise the existing standards for evaluating them.

The Commission which clears all major dam projects, is now even challenging the assumption that hydro is the cheapest form of electricity. It argues that rehabilitation costs and damage to the ecosystem are being grossly underestimated in feasibility studies prepared by State authorities.

The proposed 220 MW dam on the Bedti river in southwest India is an example of how cost-benefit analysis can be manipulated. A farmers' cooperative in the nearby town of Sirsi whose areca nut and pepper plantations will be submerged by the dam's waters claims to have discovered serious shortcomings in the detailed project reports prepared by the Karnataka Power Corporation.

In the case of the Tehri dam, already under construction in the Himalayan foothills, local environmentalists have warned of the dangers in the event of a major earthquake, because the dam and the lake it will create lie in a seismic zone.

In south India a protest against the Silent Valley hydro project was sparked by the threat the project posed to the tiny remaining, genetically rich, tropical evergreen forest in the country.

The Indravati dam in Orissa will submerge 59 villages, displacing many tribal families, and submerging 33,000 acres.

CSO: 5000/7030

EDITORIAL NOTES DANGERS OF GANGES POLLUTION

Calcutta THE STATESMAN in English 28 Jan 83 p 8

[Text]

ACCORDING to recent studies conducted by West Bengal's Water Pollution Board the bacterial count of the water of the Ganga between Uluberia in Howrah district and Diamond Harbour and beyond has shown an alarming increase, having gone up by about 300 per cent over previously recorded figures. The water is now considered unsafe even for irrigation purposes, and the authorities have warned that unless drastic remedial steps are promptly taken the situation may become irretrievable. Congested areas in U.P. particularly downstream from Kanpur and Allahabad, have also recorded extremely high water pollution counts. Studies undertaken by the Central Pollution Control Board, which since 1979 has been monitoring the 2000-km stretch of the Ganga from Hrishikesh to Diamond Harbour, indicate that the dumping in the river of untreated domestic sewage and industrial effluents has increased despite the existence of anti-pollution legislation and the periodic official warnings. A major source of riverine pollution is said to be the large number of khatahs in urban areas. Livestock waste breeds far more bacteria and contributes more to turbidity than untreated domestic sewage. But despite repeated drives unauthorized khatahs in Calcutta and other areas have proliferated.

The crowded melas along the Ganga also contribute

significantly to pollution. A mobile laboratory of the CPCB which measured the water pollution count at the recent Ganga Sagar mela discovered that the bacterial content of the water rose sharply as the pilgrims began to arrive, eventually reaching a figure of over 9,000 organisms per 100 ml, which far exceeded the level considered safe for bathing, which is 500 per 100 ml. Experiments conducted by the Board at the Ardh Kumbha Mela at Prayag in 1981 showed that a 72-hour pre-chlorination programme kept the bacteria count to acceptable levels and this treatment has been recommended for all such occasions. The problem of untreated domestic sewage is likely to prove less tractable. While admitting the urgent need for Calcutta Corporation and the municipalities to install sewage treatment plants the West Bengal Minister for Local Government and Urban Development is on record as having said that it would be "too much to ask them to do it in view of their financial difficulties". However, resignation as a result of such constraints cannot be afforded either. The CPCB has recommended that in the dry season the flow from Farakka into the Bhagirathi-Hooghly channel be increased from the present 12,000 cusecs. Another suggestion is that fisheries be introduced between municipal outlets and the river to act as initial low-cost waste stabilization systems.

CALL FOR JOINT APPROACH ON ENVIRONMENT

Nairobi THE STANDARD in English 22 Jan 83 p 2

[Text] The problems of environment degradation, soil erosion and deforestation required the joint effort of the various Ministries and nongovernment organisations to find a solution through a coordination of activities which could bolster the national conservation campaign.

The Chairman of the Permanent Presidential Commission on Soil Conservation and Afforestation, Mr Z.M. Anyieni, said this while lecturing at Egerton College on "The Activities and Impact of the Commission in Environment Management to Promote Development and People's Welfare."

Threatened

He cited road construction as a destructive force and said it was a problem conservationists had to contend with in national development.

Mr Anyieni said the country's natural resources were increasingly threatened by improper use, resulting in decreasing soil facilities and destruction of forest and shrub, particularly in water catchment areas.

The Commission was analysing the root causes of the problems with a view to halting its momentum and rehabilitating the environment, he said.

He added it was his Commission's conviction that Kenyans must be aware of the problem so as to join hands in implementing various collective measures. This, he said, was the only way to avoid the disaster which the future generation may face following the depletion of soil and forests.

83: 591796

LESOTHO

BRIEFS

DROUGHT DISASTER THREAT--The drought in Lesotho has reached such proportions that the country faces a national disaster, the Minister of Agriculture, Mr Peeta Peeta, said in Maseru yesterday. Hardest hit of the country's 10 districts are Mhaleshoek, Mafeteng and Quthing in the south and the mountain areas of Quachasnek, Mokhetlong and Thabatseka in which there will be "dangerous shortfalls" of food. Because of the situation the Government had decided to impose restrictions on the importation of cattle.--Sapa [Text] [Johannesburg THE CITIZEN in English 17 Feb 83 p 8]

CSO: 5000/100-E

DROUGHT DESCRIBED AS 'WORST OF CENTURY'

Johannesburg SUNDAY TIMES in English 6 Feb 83 p 15

[Article by Bevis Fairbrother]

[Text]

THE relentless, two-year drought, said to be the "worst of the century", is ruining farmers.

Many, near bankruptcy, are seeking credit on credit to pay multi-million rand loans.

Crops are burning up and livestock are dying.

Even with a good rainfall now agricultural experts doubt if it will help the situation.

The damage has already been done and will be felt for years to come.

Effects

Yet, when will the consumer the man-in-the-street, feel the effects?

Apart from gardens and swimming pools suffering as a result of water restrictions, there has been little evidence that the drought will affect his pocket or the pantry.

But it will come. Mr Johan Willems, chief economist for the South African Agricultural Union, has warned.

Winter is likely to be a hard and cold season for all.

The next few months will tell whether there will be a drastic shortage of grain and whether the country will have to import.

Normally the stabilisation fund would pay for the imports.

"But, because of this drought which I would say is the worst of the 20th century, the farmer certainly needs more help than the consumer."

"There is a very good chance that there will be a price increase in the next few months," said Mr Willems.

He predicted that there would also be a shortage of dairy products in the near future.

"There is not enough fodder for the animals to last the winter."

Although there was a good supply of meat at present, good cuts were scarce as farmers were marketing all their "bad animals" before the winter.

There was already a shortage of fresh fruit and it would grow worse with plantations dying in the lowveld.

Maize was more hopeful. Although farmers were cutting maize for fodder there was still hope the crop would be able to meet the domestic market.

"Consumers don't realise the problems yet but this drought will be felt well into 1984."

Upturn

"We expect an economic upturn next year with greatly increased demand for food. But the farmers will not be able to supply," said Mr Willems.

Mr Jasp Wilkens, president of the agricultural union, said that it was thanks to the much maligned co-operative marketing systems that the consumers would still not feel the full effect of the drought.

"There is a tendency, particularly in the good years, to criticise the co-operatives and marketing boards."

"No thought is then given to the fact that these organisations were in fact established with the view to poor years."

The co-operatives now had to bear the brunt to help farmers through the financial crisis caused by a second consecutive drought.

Selling

"Farmers no longer have any security. Some are even selling tractors to raise loans," said Mr Willems.

The union was presently busy with surveys and hoped to present a report of the situation to the Government in March.

"We hope to present a rescue operation, something that will stop the downfall of many of our farmers," said Mr Willems.

Figures obtained from co-operatives showed that last year there was a credit increase of R911.2 million — about 60 percent up on the previous year.

This year credit to the producer increased by a further R245.7-million.

Last year farmers were still left with a R369.6-million debt even after their harvests were marketed.

It was a drop in income of about R700-million.

It was expected that this year would be worse.

The result would be that farmers would have no fixed income for several years to come.

IMPACT OF DROUGHT ON FARMERS DESCRIBED

Johannesburg THE CITIZEN in English 1 Mar 83 p 3

[Article by Fanie Hattingsh]

[Text] The drought has reached such critical proportions that farmers are facing what some say will be the most difficult period since the great drought and depression of 1933.

An extensive survey conducted in the Transvaal has elicited a sombre picture:

- As a result of the drought and other factors, farmers are deeper in debt than ever before.

- Maize, sorghum, ground-nut, dry bean and potato farmers are expecting a crop of slightly over 35 percent.

- If it does not rain soon, banana farmers in the sub-tropical areas are bound to have a bad crop next year.

- Stock farmers are facing the most dismal winter season in memory.

A spokesman for the SA Agricultural Union said in Pretoria yesterday that the situation had become so critical that steps were being

taken to place the Government in possession of all the facts.

The executive committee, general board and co-operative Board of the union are to hold a series of meetings from March 7 to 10 to discuss the situation and to consider what representations should be made to the Government on behalf of the farmers.

Surveys

Co-operatives throughout the drought-stricken areas are busy with surveys and while no figures are available yet, spokesmen for most co-operatives have described the situation as being "desperate".

In most areas, rain within the next week or so would achieve little more than pulling through the severely diminished crops of maize, dry beans, sorghum, ground-nut and potatoes.

With so little of the summer growth period left, even good rains would achieve little in improving the winter grazing, with the result that stock-farmers are

entering their most critical winter season in almost 50 years.

Fruit farmers in the Far Northern and North Eastern Transvaal are picking fruit at the moment, but are suffering heavy losses as a result of sunburn and lack of moisture.

Banana Problem

Banana farmers are facing an additional problem: suckers being formed at the moment are essential to the next crop, and if it does not rain soon there is a strong possibility of a failed crop next summer.

Farmers who do not derive their water from irrigation schemes have been left without water altogether. And this under a burning sun.

In the Eastern Transvaal the situation has also reached a highly critical stage. Witbank has already been declared a drought-stricken area, and other towns — among them Middelburg, Amersfoort, Volksrust, Grevengstad, Nigel, Bethal, Platrand and Perdekop — have applied to be declared drought-stricken areas.

North-Western Transvaal farmers are equally in a quandary. Some ground-nut farmers have begun harvesting prematurely because the plants have dried out completely, while others have simply written off their crops as a complete loss.

Many farmers are turning their crops into silage for winter, and are selling off surplus stock which they will not be able to feed.

In the Northern Transvaal area bounded by Pretoria, Mariboe, Hall, Messina and the Botswana border, the smallest maize crop in years is expected.

Many farmers have taken a chance by sowing their winter wheat crop on dry lands, hoping that they will be saved by late rain.

Cattle farms in the area have been left desolate after farmers moved their stock elsewhere. Where the stock has been taken to, remains a riddle to other farmers.

Already debt-ridden, they fear that the situation can only worsen during the coming winter.

DEVASTATING DROUGHT HITS BAZANKULU

Johannesburg RAND DAILY MAIL in English 10 Feb 83 p 3

[Article by Harry Mashabela]

[Text]

GAZANKULU in the Northern Transvaal is in the throes of a devastating drought which has left the countryside littered with thousands of carcasses of dead cattle lying in a desert landscape.

And, if it does not rain in the next month or two, livestock in neighbouring Lebowa — especially at Bochum, north-west of Pietersburg; Dwars River, near Soekmekaar; and in Sekhukhuleni, south east of Pietersburg — will be destroyed, too.

In Gazankulu, the situation is very bleak. The Chief Minister, Professor Hudson Masetlha, said yesterday 30 000 head of cattle had so far been lost. Damage estimated at more than R12-million had been caused.

Only a miracle can save the thousands of other cattle still listlessly roaming the territory, desperately searching for grazing or water.

The drought has reduced remaining cattle to mere skeletons. The land has been reduced to long stretches of bare gravel.

Prof Ntsanwisi said the territory had also lost about R14-million. Landowners have had no crops for the past two years and farmers have had to retrench workers as a result of the drought.

His government needed at least R4-million over the next 12 months to help the community.

Dr Cedric Phatudi, Chief Minister of Lebowa, described the drought situation in his territory as "very serious and frightening".

Representatives of both the Lebowa and Gazankulu governments would be meeting officials of the Central Government in Pretoria today to appeal for financial aid for their territories now suffering under blistering drought.

People in Gazankulu told the Mail that when cattle died they took only the liver and rump, discarding all else because the rest was mere bone, with no meat left.

For the past two years, rural communities in Gazankulu and Lebowa have had no crops and the people are now suffering from hunger and lack of water.

The high cost of living and chronic unemployment are making matters worse.

Prices of foodstuffs in local stores are prohibitive. An 80kg bag of mealie meal costs between R25 and R27.75; 50kg of mealie meal R18; 2.5kg of sugar R1.70; 300g of tinned beef R1.40; fish between 68c and 88c; condensed milk 98c (large tin) and 73c a small tin.

Even fruit is expensive. Tomatoes, bananas and mangoes in the Tzaneen and Trichardt districts cost between 10c and 20c each. Inhabitants said potatoes were "very scarce". Before the drought a mango cost 5c, tomatoes from 3c to 4c each and a banana 2c.

Private medical doctors serving communities in the region told the Rand Daily Mail that food deficiency and water-borne diseases were the biggest problems among inhabitants.

Malnutrition was common among children and pellagra among older children and adults, especially alcoholics. Even breastfed children were suffering from malnutrition because of the "poor quality of milk" they got from their mothers.

The main water-borne diseases, among them typhoid and bilharzia, were causing diarrhoea and vomiting. Other infections — mainly among children — were polio, measles and chest and eye ailments, said the doctors.

Sexually transmitted diseases such as gonorrhoea and syphilis had become common among people in the villages, too, they said.

HUGE CROP LOSS FEAR IN NATAL DROUGHT

Johannesburg THE CITIZEN in English 24 Feb 83 p 10

[Text]

DURBAN. — Natal is facing an overall estimated 90 percent crop loss as the intense drought and searing heat shows no sign of abating.

"Gloomy" summed up the feelings of the various welfare bodies in agricultural unions interviewed by The Citizen this week over the drought situation in the province.

Several agricultural co-operatives estimate that the drought could have caused as much damage to produce a 90 percent crop failure — and this applied to all crops.

The hardest hit appears to be the maize crop. In several areas of Natal and Zululand the intense heat has virtually burnt away huge areas of maize.

The Natal Agricultural Union is still not in a position to give an exact figure of the maize crop loss but at this stage it is expected to be down about 45 percent on last year.

The average yearly yield for the province is

about 343 000 tons but estimates at this stage indicate that the yield will be only about 55 percent of this figure.

The prolonged drought is also causing serious problems in Northern Zululand where water rationing has been introduced everywhere. There are fears of a disease outbreak in the Golel area because of the low level of the Pongola River.

However, the Regional Water Board in the province is attempting to improve the situation by releasing as much water as possible from the Pongola port dam.

The drought is really biting residentially in the Pietermaritzburg area. Here, a complete ban has been imposed on the use of hosepipes to water gardens; but in spite of this there has only been a seven percent drop in water consumption.

A spokesman for the Pietermaritzburg City En-

gineer's Department commented yesterday that the low reduction figure — the target is 10 percent — meant that "irresponsible" residents were still watering their gardens in the evenings.

He said these people were being extremely foolish because the situation in the level of the Midmar Dam, one of the two dams which supply the city, was critical. It has been estimated that unless really heavy rains fell shortly the dam could be at its lowest level ever in about 120 days.

The heavy rains on the Natal South Coast in the past few days have eased the overall position in the sugar belt there. But, according to a spokesman for the South African Sugar Association, it would take at least another four heavy downpours — say a rainfall of 50 mm each time — for the cane crop to come right.

ZULULAND TOWNS ASK FOR TRUCKS TO FERRY WATER

Johannesburg THE CITIZEN in English 23 Feb 83 p 12

[Article by Tim Clarke]

[Text]

THE South African Transport Services have been asked to make trucks available to ferry water to various towns in northern Zululand because of the severe drought.

Farmers in the area said the situation was so serious that hundreds of workers have had to be paid off.

Several farmers told The Citizen this week that there was "simply no work" because the searing heat of the past three months had drastically curtailed farming activities.

Many of them said they were "barely keeping body and soul together" and had been forced to pay off labourers who had worked on their farms for many years.

With the Pongola River at its lowest ebb in 38 years, farmers have also been forced to cut back on drawing water from

the river for irrigation.

Towns in the area have stopped drawing water from the river because it is suspected the water could have been polluted by a large number of dead fish.

South African Transport Services have agreed to ferry water from Richards Bay to Golel, near the Swaziland border, which is virtually running dry. There is little drinking water in the town and no water available to use on gardens.

The SA Transport Services have also been supplying water to Luvumisa, a town of 4 000 inhabitants in Swaziland.

Farmers in the Pongola area say the water in the river beyond the weir has been reduced to a trickle and the need to build a dam in the area was now great.

They said they hoped the Government would take notice of the serious situation in the area.

RIVER POLLUTION HITS KRUGER PARK

Johannesburg THE STAR in English 10 Feb 83 p 1M

[Article by Clyde Johnson]

[Text]

Polluted silt has all but sterilised the Olifants River in the Kruger National Park in what has been described as the Lowveld's worst fish kill in 75 years and only barbel are known to have survived.

The park's Chief Warden, Dr Uys de V Pienaar, who described the incident as "catastrophic," said the ecology of the Olifants valley may take decades to recover.

"We are netting the river to determine our losses. It appears pollution may have wiped out the majority of the 20-or-so species of fish in the river."

The stench of death has drifted to Satara rest camp 75 km away.

Visitors and staff at Satara and Olifants camps were unable to use domestic water until it had been treated. The major cause of the pollution disaster is apparently contaminated silt from the dam outside the park.

Thick sludge impregnated with heavy metals that are lethal to fish is clogging much of the river. The pH reading is 2.9 — about the acidity of vinegar.

The Department of Water Affairs is investigating what it describes as the worst fish kill in 65 years. The last fish kill was in the 1920s when small gold mines near the headwaters of the Sabie River polluted the water with mercury.

Dr Pienaar said 80 years of conservation and preservation had been lost and every part of river life had been affected.

Eels which lived in the river for 20 to 30 years had died and hippo had been deprived of their habitat because pools had silted up.

Precautions

The reason for the acid and metal pollution was still a mystery but Dr Pienaar said it was important the guilty parties be traced as quickly as possible.

They must be suitably prosecuted and strict precautions must be taken to avoid a repetition of this disaster.

Water Board officials at Phalaborwa yesterday refused to comment on the incident because it was considered a domestic matter.

The Star was referred to the Water Board's chairman, Mr Louis Fourie but he could not be contacted.

● The Levubu River which runs through the wildest area of the park — the Pafuri — is under threat from pollution because of planned coal mining in Venda.

● The Lower Sabie is threatened continuously by depleted water. It is being tapped more and more by development outside the park and is also periodically contaminated by pesticides washed off agricultural land. Most of its fish carry residues of pesticides.

DETAILS ON VAALDAM, STERK FONTEIN DAM GIVEN

Johannesburg THE STAR in English 2 Feb 83 p 8

[Article by Hannes Ferguson]

[Text]

For drinking, bathing and other uses in Johannesburg, and for the high water for irrigation. It will, however, be more and more important to be able to store water against drought.

Vaaldam now has a capacity of 2 191 mcm. Its capacity will be increased by six metres to 2 529 mcm. At Sterkfontein Dam the big earth wall is being raised from 63 m to 93 m, boosting its capacity to 2 659 mcm -- even more than the enlarged Vaaldam.

At Sterkfontein water is stored safely, the dam is so deep that evaporation is only a fifth of that at Vaaldam.

Sterkfontein water comes from Natal -- out of the Tugela River -- to quench your thirst in Johannesburg.

The beauty of the scheme is that every drop imported from Natal will grow to two-and-a-half drops at the Vaal River Barrage where the Rand Water Board diverts your water. This is possible because the Sterkfontein water reserve enables the Directorate of Water Affairs to operate Vaaldam at a high risk of supply failure. It can now safely allow the level of the Vaaldam to drop to 20 percent of capacity. Thus the average water level of the dam will be much lower than before, exposing less water surface and greatly reducing evaporation. And, by having more spare capacity, Vaaldam can trap far more floodwater for beneficial use.

Will it be needed? Usually late rains fill Vaaldam to a safe level but, one day, one year, a drought will empty it and Sterkfontein will rescue us.

Next year will be better. Vaaldam is being raised by six metres to increase its capacity from 2 191 mcm to 2 529 mcm. At Sterkfontein Dam the big earth wall is being raised from 63 m to 93 m, boosting its capacity to 2 659 mcm -- even more than the enlarged Vaaldam.

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Vaaldam boating enthusiasts will have to cope with wide fluctuations in the water level. But the 347 mcm of Tugela water received at Sterkfontein boost the safe yield of the Vaal River dams by 800 mcm annually to a total of 2 345 mcm. This will be adequate until 1992.

How is this done? It is done by way down the escarpment.

In 1974 a barrage was built in the Upper Tugela River at Driel, near Bergville, with a pump station forcing the water through a large pipe to a high point four kilometres to the west.

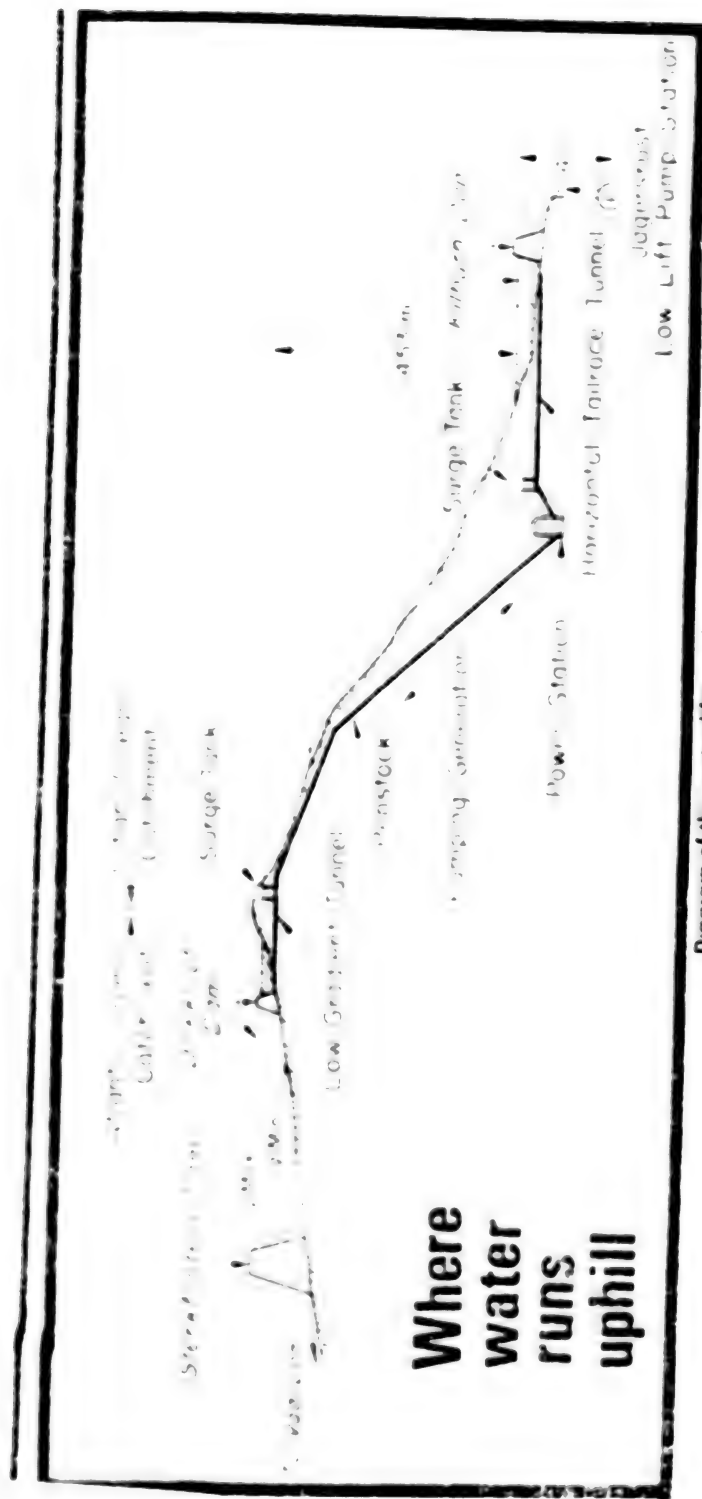


Diagram of the water lifting scheme

From there, the pumped Tugela water runs by gravity along a canal to a low point on Jagersrust Farm, near the foot of the escarpment.

There the Directorate of Water Affairs used to operate a second pump station, lifting 130 mm annually, 492 m up into Sterkfontein Dam beyond the watershed.

The present larger scheme lifts about 347 mm annually by making use of a large water battery run by Escom.

The combined scheme is a technical marvel, based on the peaks and valleys of daily electricity consumption from Escom's national power grid. Adjusting the generation of power to the hourly pattern of consumption is a costly job, mainly done by starting up expensive coal-fired power stations during peak periods.

This can be done by the water battery at Sterkfontein more cheaply. Every day, for a 10-hour period when power demand is slack, Escom pumps 9 mm from the Kiburn reservoir, adjoining Jagersrust, up the escarpment, into the Driekloof reservoir, which is a water impartment of Sterkfontein Dam.

Every hour 2 million water units are taken from the power grid to pump this. Their duration is extended to 10 hours.

hours, 12 mm of water are run down the pipe again to generate electricity, putting power back into the grid when it is needed most.

So the same water flows up and down the mountain in a daily rhythm.

The four giant motors and pumps used to bring the water up during the pumping phase are simply reversed and function as turbines and generators in the generating phase.

Starting with Driekloof full on Monday mornings, it is empty after the fifth generating phase on Friday nights. Then Driekloof is filled again on Saturdays spilling over into the rest of Sterkfontein Dam for 10½ hours every day.

In this way Sterkfontein sets 347 mm annually for Vaal and Escom evens out part of its power fluctuations by operating the pumped storage scheme.

Taking into account a large dam at Woodstock, above Driel, to regulate the Upper Tugela and another near Spioenskop to stabilise the river downstream, the whole series of works cost the taxpayer R600 million.

By building an additional floodwater dam below Spioenskop, water from Spioenskop Dam can also be used to augment Vaal. The pumping time at Escom's water battery will then be extended. This will quench

Johannesburg's thirst until around 2000.

The next stage will be to pump water from the Hendrik Verwoerd Dam on the Orange River all the way up to the Reef and, after that, Johannesburg will have to look to new, cheaper seawater-desalting technology. This will be the ultimate solution.

At some stage the city will have to embark on desalting its water to protect the ecology of the Hartbeespoort Dam system into which its sewage is now dumped. This will cost R1 200 million in capital outlay at 1982 prices.

Another R800 million may be earmarked for progressively re-cycling

Johannesburg sewerage water. Both schemes together will mean a burden of between R1 and R2 a cubic metre of water in capital costs, or 30c to 60c a cubic metre as a current charge. It will mean doubling or tripling the present water charge of 30c.

That is not counting the outlay for the extended Tugela scheme, the still uncharted Hendrik Verwoerd Dam water supply system or the de-salting of ocean water.

It does not seem realistic to expect the country as a whole to contribute to foot most of Johannesburg's water supply bill for ever.

BRIEFS

FIRES DESTROY CAPE VELD--Cape Town--Forty separate bush fires have destroyed 62 000 hectares of veld in the southern and southwestern Cape in the past four months, the Administrator of the Cape, Mr Gene Louw, said at the weekend. Speaking at the opening of an environmental education centre at the De Hoop-Potberg Nature Reserve near Bredasdorp, he said an average of 700 hectares a day had been ravaged by fires which, in most cases, were caused by human error or negligence. The education centre will provide courses in ecology and conservation for schoolchildren, student teachers and youth leaders. Mr Louw said control and development of the Cape's long coastline was complicated by overlapping bureaucracy. Local authorities could therefore not exercise complete control over the large-scale removal of bait for commercial purposes. "We are powerless when a permit not issued by us allows the permit holder to remove half a ton of red bait a month over 50 km of coastline, of which 16 km falls within the nature reserve." The nature reserve's coastline should be closed to such permit holders and the province should be allowed to exercise complete control over the removal of bait from the nature reserve's coast. He also expressed concern over the Southern Cape's unique fynbos which is being destroyed by intensive urbanisation and modern agricultural practices.--SAPA [Text] [Johannesburg THE CITIZEN 11 English 21 Feb 83 p 8]

PIETERMARITZBURG WATER CURBS--Pietermaritzburg residents are now facing some of the toughest water restrictions in the history of the Natal capital as the city council does everything possible to conserve the dwindling water supply. At a meeting of the works committee of the council on Wednesday evening it was decided to impose a complete ban on the use of hosepipes for watering gardens. A council spokesman said yesterday that a notice will be published on Tuesday, prohibiting the use of hosepipes for watering gardens and lawns and restricting the filling of swimming pools to between 5 pm and 7 pm on Wednesdays. The ban on hosepipes, however, will not apply to Government, municipal and commercial nurseries. The watering of turf wickets, bowling greens and golf greens will be allowed between 9 am and 11 am on Mondays and Fridays. There will also be a ban on sprinklers and the use of hosepipes for washing vehicles. The works committee decided on the drastic restrictions after hearing a report from the city engineer, Mr Graham Atkinson. He said that the level of the water in the dams supplying the city, the Midmar Dam and the Albert Falls Dam, was cause for grave concern. At present residents are allowed to water their gardens with hosepipes between 2 pm and 4 pm on Wednesdays and Fridays. [Text] [Johannesburg THE CITIZEN 18 Feb 83 p 11]

NATAL DROUGHT CRITICAL--The drought is so critical in Northern Natal that at least six towns have now imposed severe water restrictions. The worst affected area appears to be at Vryheid where restrictions have been in force for two years. A spokesman for the town council said yesterday that the situation was "desperate". He said that he believed local residents were playing the game in conserving water but that the "terrible heat" was sapping all available water supplies. He pointed out that one of the two dams supplying the town with water was now only 10 percent full. It has been decided to stop drawing water from the dam. Water restrictions have also been enforced this week in the two mining areas of Clifdale and Vaalbank near Vryheid. There are big coal mines in the area and the continuing drought could affect production. Water restrictions are also in force at Dundee, Glencoe, Newcastle, Paulpietersburg and Utrecht. The maize crops in these areas have almost all withered away from the fierce heat and the grazing situation is also critical. [Text] [Johannesburg THE CITIZEN in English 18 Feb 83 p 11]

OPS CANAL--Cape Town.--The Government has decided to go ahead with the construction of a R60-million canal scheme between the P K le Roux Dam and the drought-stricken Rietrivier area in the southwestern Orange Free State. This decision had been taken despite severe financial restrictions, the Minister of Environmental Affairs and Fisheries, Mr Sarel Hayward, said in a statement issued in Cape Town. The Rietrivier area was experiencing an exceptional drought period and the Kalkfontein dam had only been able to meet requirements to a very limited extent for the last few years, he said. "This dam presently contains less than 3 percent of its capacity and no water could be released in the current season." The irrigation farmers in the Rietrivier water scheme were experiencing serious socio-economic problems and financial aid was already being given to them. After the Department of Environment Affairs, in co-operation with the Department of Agriculture, had considered various possibilities to improve the situation, it had been decided to go ahead with the construction of the canal scheme despite severe financial restrictions, Mr Hayward said. The scheme will form part of the proposed Orange River project. It consists mainly of a pump station and an ascending conduit at the end of the Vanderkloof scheme's existing rightbank main canal, as well as a canal of over 100 km to the Rietrivier area, and a number of regulating dams. "The estimated cost of completing the scheme at present prices is about R60-million and it is intended to start construction in April 1982," Mr Hayward said.--Sapa. [Text] [Johannesburg THE CITIZEN in English 28 Feb 83 p 5]

WINTER WATER CRISIS--South Africa, could face a serious water shortage this winter unless the situation improves, a spokesman for the Department of Environmental Affairs said yesterday. "The whole issue of urban water restriction is in the pipeline but no final decisions have been taken," he said. The big suppliers of water, for example the Rand Water Board, have been asked to cut down their supply of water to various reef towns by five percent. "Municipalities have shown a willingness to help, and are imposing restrictions," the spokesman said. So far, the watering of gardens in Johannesburg and surrounding reef municipalities have been restricted. The level of some South African dams is at an all-time low, and the latest statistics show that several areas are already in trouble, notably the Chelmsford area in Natal. The situation in some areas in the north-western Transvaal and the Free State is "very serious". The water flow in the Vaal River is at an all-time low.

but ironically the country has more water than last year because of the commissioning of a number of new dams. Water for irrigation has been cut to a very large extent, with the farmers' quota having been restricted to "get them through this year and into the next". [Text] [Johannesburg THE CITIZEN in English 1 Mar 83 p 8]

11-1-83--The standing committee of inquiry into the economic position of farmers and the supply of agricultural produce has been instructed to lay recommendations before the government before the end of the next month to enable the government to consider further assistance to agriculture. The Minister of Agriculture, Mr Greyling Wentzel, said in Cape Town that the government was aware that the extent and intensity of the present drought would have a serious medium- and long-term effect on agriculture. That was why the government had instructed the Jacobs Committee to prepare its recommendations. Mr Wentzel said in a statement that he had informed the cabinet of the most recent developments in the drought and of the fact that conditions were deteriorating daily. The cabinet has given approval for the immediate future for continued implementation of existing drought aid schemes, and wherever necessary these schemes may be adapted to cope with the situation for the present. The government reaffirmed its determination to assist farmers in these difficult times. A further announcement on additional aid would be made as soon as possible. [Text] [MB240850 Johannesburg Domestic Service in English 115 GMT 23 Feb 83]

11-1-83--Cape Town--The Government had instructed the standing committee of investigation into the economic position of the farmer and agricultural produce in general (the Jacobs Committee) to make recommendations before the end of the next month to enable it to consider further measures to aid farmers in drought-stricken areas. Announcing this in Cape Town yesterday, Mr Greyling Wentzel said he had informed the Cabinet fully about the dire drought conditions as well as the fact that the situation was deteriorating daily. "The Government is concerned about the state of emergency that has developed in agriculture, especially in certain areas, and has noted the steps already taken to determine the exact situation and its implication. "The cabinet has agreed, as far as the immediate future is concerned, to the continuation of existing drought assistance programmes and that these schemes be adapted wherever necessary. "The Government wants to assure the farming community of its assistance in this difficult time. "A further announcement about additional assistance will be made as soon as possible," Mr Wentzel said.--Sapa [Text] [Johannesburg THE CITIZEN in English 24 Feb 83 p 16]

DROUGHT EXPECTED TO REDUCE SUGAR CANE YIELDS

Mbabane THE TIMES OF SWAZILAND in English 7 Feb 83 pp 1, 16

[Text]

SUGAR cane yields in the lowveld are expected to drop by five per cent because of this year's drought.

This will mean a shortfall of more than E1 million in farmers' gross income.

The general manager of the Swaziland Irrigation Scheme, Mr Dave Clark, confirmed that sugar cane farmers already anticipated the five per cent drop this season.

"The drought situation in the catchment of the Komati River both in the Republic and in Swaziland, remains extremely serious for local consumers of irrigation water from the Komati River," Mr Clark said.

He added: "Although rain has fallen locally in Tshaneni and Mhlume during January, the flow of the Komati River remains very low. Whereas from the 1965-83 records the flow of the river during January has averaged 1 6000 cusecs, during January the average flow has been only 382 cusecs."

According to Mr Clark, rainfall for January 1983 had been 200 mm against the long term average of 129mm. The rain had resulted in the sugar cane

crop being saved from almost certain disaster for

1983. Further rain was required locally during February and March to ensure that the loss of yield did not increase.

"Very strict water rationing has been introduced and consumers of water are now only 25 per cent of their total requirements," Mr Clark told The Times.

He said the rationing was necessary to ensure that the water in the Sand River Dam was used to best advantage with the presently predicted unreliability of the Komati River in the coming winter.

The drought situation in Southern Africa is worrying many leading personalities involved in water resources.

The senior water resources engineer in the Ministry of Works, Power and Communications, Mr Tom Brook, has said that unless the country received sustained rainfall during February and next month, the dry season could be critical for many irrigators.

He said the whole southern and eastern African was affected by the drought in varying degrees.

All the river flows were lower than they had been in many years and the situation was very serious.

Mr Brook has revealed that South Africa had already released to Swaziland 10.5 million cubic metres from Vygeboom Dam over several occasions since last August. Meanwhile, The Lowvelder newspaper of the Transvaal has reported that the Water Research Commission has initiated a four year scientific rainfall stimulation project in the Nelspruit area.

The Lowvelder said the project was designed to determine whether potential existed for rainfall stimulation in the area around Nelspruit.

The Swaziland government is not involved at all in the project although the Kingdom would be interested in the results.

A senior government official told The Times: "This is a very very expensive project. You have to pay for the plane and the silver iodide used. A lot of work has been done all over Southern Africa but this scheme has not been proven anywhere in the world."

DROUGHT IN MANICALAND TERMED 'DISASTROUS'

Harare THE SUNDAY MAIL in English 13 Feb 83 p 3

[Text]

THE lush green "undrought-stricken" area of Inyanga and areas immediately surrounding it provide a striking contrast to the generally arid conditions in Manicaland.

For in the mountains, there has been enough rain to keep fields green, while farther west, south and north, Manicaland is suffering from a drought that has killed cattle and crops alike, as well as a few people.

Although in the mountains the streams are still flowing, farther south, the Sabi River that provides the Lowveld with water has stopped flowing altogether.

The whole of the Sabi Communal Land, Marange south of Changanadzi, east of Birchenough Bridge and the Inyanga District are reported as being among the worst affected areas.

The acting provincial agriculture and extension officer in Agrotex, Mutare, Udo Mke Mariti, said last week. The crops in Manicaland will reap only two or three bags, where in a normal year most communal farmers would reap 10 to 15 bags.

Others, despite replanting, will not be so lucky.

Harare's Assistant Director (Field), Mr Munetsi Pwarayi, said: "It's a disastrous situation. And no decision on help has been made for people living in these areas."

He suggested small farmers should sell their old cattle and keep only the hardier young ones.

"Even if we do get a little rain, the grass that grows will not feed all the cattle," he said. "Farmers should get rid of their old stock and keep just the young. That way there should be enough food for the young without having to feed old stock."

He also said there was no reason why cattle should be driven to resettlement areas because in the end many cattle would be lost that way.

But it is not just the outlying areas of Manicaland that have been hit severely by the drought.

The Mutare City Council recently restricted water use.

Residents in the town are not allowed to use hoses or sprinklers and they cannot wash their cars.

Any abuse of these restrictions means a \$1 000 fine.

The City Engineer in Mutare, Mr Mohindar Khosla, said that although Lake Alexander, which supplies all the water to Mutare, was not as low as it was in 1973 (59.7 percent full), it was rapidly approaching that level.

"Lake Alexander is now 64 percent full," he said. "When it reaches 60 percent, the council will have to place further restrictions on the use of water."

Since the restrictions had been imposed, daily water consumption had been cut from 27 000 m³ to 22 000 m³.

"But in December last year, the dam was 77 percent full," said Mr Khosla. "In the past few months more than 13 percent of the water from Lake Alexander has been lost."

"We are just waiting for the Ministry of Water Resources and Development to come to a decision before imposing sterner water restrictions."

NFAZ LISTS DROUGHT AREA PRIORITIES

Harare THE HERALD in English 18 Feb 83 p 6

[Text]

A LIST of priorities covering areas of immediate concern in drought affected communal areas has been drawn up by the president of the National Farmers' Association of Zimbabwe, Cde Robinson Gapare.

Top of the list is a call on the Government to seriously consider giving drought relief to producers in regions most suffering to avoid what Cde Gapare described as "imminent disaster".

He suggested the Agricultural Finance Corporation should allow association members still owing 1981-82 loans to carry them to the 1983-84 season.

"Some farmers have last season's loans which they are unable to pay again," he said.

A campaign should be launched now to educate them that when they pay back the loan will have a slightly higher interest.

Grazing schemes, he said, should be started without delay to redress the imbalance being heavily weighted on promoting crop production at the expense of veld management.

Cde Gapare appealed to NFAZ members to sell old stock likely to die of drought and keep young stock for breeding.

"There is real need to convince the farmers that there is wealth in livestock both on hoof and on the hook."

The Government should join hands with the association which has started a vigorous campaign to encourage the farmers to build dams and fence off sponges.

These suggestions were based on a countrywide drought probe by the association indicating severe livestock loss posing serious drought power problems next season.

The Minister of Agriculture, Senator Denis Norman, has told Parliament drought relief was not being thought of at the moment.

Last season Senator Norman announced that drought relief had been scrapped in favour of generous basic producer prices. The alternative would be to reduce price and set up a fund for the not-so-rainy day.

Farming sectors have said they would be fighting for realistic prices this season in a bid to prop up battered confidence in the industry.

VAT PRESIDENT ON FINANCIAL IMPACT OF DROUGHT

Harare THE FINANCIAL GAZETTE in English 29 Jan 83 p 1

(Text)

THE drought was a "national disaster" and its financial effect on many commercial farmers had been dramatic, particularly for those in the maize and beef sectors, said the president of the Commercial Farmers Union, Mr Jim Sinclair, during an interview this week.

He said that commercial farmers produced 55% of the food marketed in Zimbabwe, and substantially more in drought years which affected communal farmers more than the commercial sector.

During the interview, published in *The Farmer* magazine, Mr Sinclair said droughts in Zimbabwe were not uncommon and he hoped a lesson had been learned from this one.

"Our resilience and determination to withstand this kind of disaster is going to be tested... and I would ask for Government's understanding of the grave problems and losses."

He said an important lesson to be learned from the drought was that commercial agriculture is a very important component in the agricultural sector of a mix of Zimbabwe.

It was not for the production of the commercial farmer, the communal farmer would be worse off than he is. And certainly the urban dweller needs commercial agriculture to provide him with his staple food. In my view commercial agriculture is crucial. I know that Government in general shares this view," said Mr Sinclair.

WARNING

He warned of the effects of the drought, saying we were still not over the worst of it. "I doubt if we will have any food export capacity for some time to come."

Its effects had been "dramatically detrimental" on maize. Cattle would be more of a long-term problem due to "decimation" of the beef herd although in the short-term there would be plenty of beef. There were also serious problems of insufficient water for irrigated crops this winter.

But, said Mr Sinclair, the situation could be worse. The nation could still be fed because of the substantial stockpile of food, particularly maize, which had been built up over the good years.

"But Government must start planning now, and indications are that it is doing so, to ensure adequate supplies of food to people in drought affected areas. Without our reserves of maize it could have been an even greater disaster."

Referring to "some opposition within Government" to the idea of holding large stockpiles, Mr Sinclair said: "I'm sure this opposition has wilted like our maize crop in the current drought. Food stockpiles in an uncertain climatic environment like Zimbabwe are essential. Anyone opposed to this policy now is obviously incorrect."

in his thinking on the food problem."

Mr Sinclair added that in his view the Government must now be looking at how to ensure continued commercial production, particularly from a farmer-viability point of view.

DISCUSSING

"We, the CFU, have our ideas on this subject and are discussing these ideas with Government. Producer prices and food surpluses are all a part of how the future of farming in Zimbabwe is to be determined."

According to the magazine, producer price talks start this week. The CFU is reported to have prepared a "package" for improved producer prices, taking into account the impact of inflation on commercial agriculture which was said to be quite dramatic.

CO-OPS NEED MORE AID TO COPE WITH DROUGHT

Harare THE HERALD in English 4 Feb 83 p 10

[Text]

THE Zimbabwe Producer and Marketing Co-operative Organisation appeals for more aid for some of its 52 fledgling co-operatives hanging in balance because of drought.

The organisation's chairman, Cde Jimmy Moyo, said the situation of the co-operatives was extremely serious, adding that achievements made since independence were at risk.

He said considerable damage had been done to crops and livestock, and that the rain which had fallen in some areas was limited.

Many co-operatives had so far been able to look on as successful but their meagre profits in this season's crop, he said, some probably would be wiped out.

Cde Fred Chizanga, chairman of Shanda Co-operative near Bindura, said drought would deprive the settlement of the hoped-for self-sufficiency in food.

The production manager of Ruzumbe Co-operative in Headlands, Cde Ephraim Vambe, said the drought had been a blow.

Drought had wiped out achievements of the past

year which had been made by farmers at Vukuzenzele Co-operative, Zvishavane. The chairman, Cde Siy Masuku, said crops had been ruined and neighbouring communal farmers were battling to get food and water.

The co-operative had been getting vegetables from a garden which had folded as the river which had been supplying water had dried up.

The irrigation scheme at Batsiranai Development Co-operative Society, Shumva, was working under strain and the management committee was thinking of reducing land under irrigation.

The chairman, Cde Tondai Mazorodze, said they were unable to keep up their eight-day irrigation cycle.

At Cold Comfort Co-operative Society, Harare, the chairman, Cde Cephas Muropa, said the situation was bad, but the settlement had other resources to depend on.

He urged the Government to aid co-operatives, which should diversify to win the drought.

The 52 co-operatives were formed by the Zimbabwe Producer and Marketing Organisation, which publishes Vanguard newspaper, edited by Cde Morris Mtsamiswa.

ZIMBABWE

DRY WEATHER HITS COTTON YIELD

Harare THE FINANCIAL GAZETTE in English 4 Feb 83 p 3

[Text]

AFTER high expectations earlier this season Zimbabwe's cotton crop is unlikely to reach the hoped-for target 200 000 tonnes. Drought conditions are now affecting many growing areas which are reporting a loss in yield potential.

Early planted cotton in Kadoma area is likely to be 30% to 40% down, according to this week's edition of *The Farmer* magazine.

The mid-Sabi areas report that yields may be down by 15% to 25% due to high evaporation and irrigation problems, but crops in the Lowveld and Midlands are said to be looking good. The estimated overall potential yield loss as at January 20 was 15% to 20%.

The president of the Commercial Cotton Growers' Association, Mr Alistair Forbes, said that the late planted dryland crops were standing up well but might require a prolonged season.

Low soil moisture was being recorded in the Bindura/Mount Darwin, Marondera, Beitbridge and Beitbridge areas and bollworm in Kadoma, Glendale and Lomagundi. However, pest infestation levels were generally low.

In a report published in *The Farmer* early in January it was said that the Cotton Marketing Board was then expecting a crop of 200 000 tonnes, as against the 1981-82 crop of 154 500 tonnes delivered.

The total 1982 crop had been sold with the exception of a few thousand bales being retained for local consumption. Sales to South Africa were continuing at nominal levels as the textile industry in that country was feeling the effect of recession.

But the report said that this position might improve as information from South Africa indicated that the Cotton Co-op, already at a low level due to unfavourable prices, could be seriously affected by drought.

It was at that date confident that it would be able to sell the lint at a "very acceptable price", as Zimbabwe cotton was still at a premium overseas for its high quality and cleanness.

However, *The Farmer* reported this week that on the international marketing scene the general outlook for world prices was "at best obscure with a bearish market" being evident. Trading activity was currently at a low ebb but the Cotton Marketing Board was hopeful of an upturn towards the end of this year.

BRIEFS

DROUGHT CAUSING CHILDREN'S DEATHS--At least 29 babies in Mutare and Manicaland have died from drought-hastened malnutrition in the past month, the provincial nutritionist Ade Mary Parirenyatwa, said this week. She said 16 babies had died from the disease at the Mutare General Hospital. Ten deaths had been reported at food distribution points and three deaths had occurred at the Roma Hospital. "The children came to Mutare General Hospital too late and they didn't respond to treatment. The malnutrition was too advanced," she said. About 60 percent of children under five years in rural areas were affected by malnutrition--40 percent of them severely. The number receiving emergency supplementary feeding was expected to more than double from 12,000 to 25,000 she said. Meanwhile, the City of Mutare has introduced compulsory water rationing with fines of up to \$1,000 for offenders, from yesterday. At a closed meeting after its normal monthly session, the City Council adapted special powers to cope with the drought under the Urban Councils Act to impose emergency water restrictions. The notice said: "The use of furrows for irrigating gardens, the use of hosepipes, sprinklers for watering gardens, washing cars and other similar purposes is strictly prohibited." District Administrators from the Midlands Province met in Gweru on Thursday to discuss the drought and the establishment of maize distribution centres in their districts, reports our Midlands Representative. Top priority is to be given to the reserves followed by Evushavane, Charter, Mvuma, Tokwe, Kwekwe, Gokwe, Garungu and Gweru. [Text] [Harare THE HERALD in English 29 Jan 83 p 1]

WATER SHORTAGES--Water shortages in many parts of Zimbabwe may soon raise a stink, particularly at the Chief Administrative Centre in Masvingo Province and the nearby Nyaningwe Growth Point. The Chibi centre has more than 2,000 workers, plus their families, and with the incorporation of Nyaningwe, less than a kilometre away, the population will soon more than double. The problem is that there is a flush-toilet system in the area and their smooth working is being threatened by water shortages, so much so that "serious consideration is being given to the idea of digging and using pit latrines. "Our chief problem is that we don't know who would be willing to finance such a scheme," the Chibi District Administrator, Cde Steven Chikasha, said yesterday. Water supply at the centre were irregular, with pumps working at odd hours. The District had its first rainfall on Sunday last week when only a few millimetres fell, and the level of the nearby dam was rapidly falling. Both the centre and the growth point were supplied with water from the same source and

any failure in the supply system would affect both areas, he said. Asked about reports that Mbezi had so far lost 1,000 head of cattle, he said the situation was becoming gloomier by the day. But a delegation of farmers were given pledges of help with their grazing problems from their counterparts in Mbezi. Another delegation would go to the Midlands with a similar plan.--Zimbabwe. As the drought worsens, tens of thousands of people in the Midlands are threatened with malnutrition, according to the provincial medical officer, and farmers in Sebakwe and Ngezi areas have been told to stop irrigating. (Text) [Harare THE HERALD in English 2 Feb 83 p 1]

EXHAUSTIVE DROUGHT RELIEF--The total allocation for drought relief for the financial year starting July 1982 was \$19 055 000, and the total expenditure to December 31 last year was \$6 501 052, the Minister of Labour and Social Services, Mr Kumbirai Kangai, told the House of Assembly last week. "It should be well appreciated that by now the unspent balance is considerable and less than this amount inasmuch as the drought has expanded rather than contracted in 1983," the Minister said. By the end of December last year, the drought relief funds were supporting over three million people or almost half of Zimbabwe's rural population each month. Seed packs, costing \$32 178, were also incorporated in the drought-relief programmes though, he said, the continuation of the drought may considerably neutralise the effect of the seed pack. A total of \$2 168 946 was spent on maize, \$5 812 on agricultural inputs, \$2 272 961 on beans, and \$7 280 on salt. The Minister said that fruits, vegetables, meat, bread, sugar or cooking oil had not been included in drought-relief funds, even though these items would be of great value within the scope of the people's regular diet. Transportation expenditure totalled \$136 556. Mr Kangai told the House that the Government's financial contribution of relief supplies by Government were recoverable from the private sector. The Ministry temporarily borrowed \$2 272 961 from the Ministry of Water Development for its drought-relief activities. The recoverable advance was made pending the Ministry of Water Development's allocation of its own funds. If the recoverable costs, he said, were to be paid to the Ministry of Water Development and the transport costs were to be paid from the total expenditure up to December last year, the Ministry amounted to \$6 307 101. This was 33 per cent of the total allocation of \$19 055 000. "Were the drought situation to worsen, the remaining \$12 747 899 would not be sufficient to sustain the same number of people," he said. "The Government's reserves will run up to about November 1983. At that time, if the drought is still as bad, funds will run out, and the Government will have to increase severely the drought, especially if the drought is as bad as it was last year, we may have to provide more drought-relief items than we have in the past." (Text) [Harare THE FINANCIAL GAZETTE in English 4 Feb 83 p 1]

THE GOVERNMENT'S contribution to the drought-relief programme for 1983 was \$19 055 000, and the total expenditure to December 31 last year was \$6 501 052, the Minister of Labour and Social Services, Mr Kumbirai Kangai, told the House of Assembly last week. "It should be well appreciated that by now the unspent balance is considerable and less than this amount inasmuch as the drought has expanded rather than contracted in 1983," the Minister said. By the end of December last year, the drought relief funds were supporting over three million people or almost half of Zimbabwe's rural population each month. Seed packs, costing \$32 178, were also incorporated in the drought-relief programmes though, he said, the continuation of the drought may considerably neutralise the effect of the seed pack. A total of \$2 168 946 was spent on maize, \$5 812 on agricultural inputs, \$2 272 961 on beans, and \$7 280 on salt. The Minister said that fruits, vegetables, meat, bread, sugar or cooking oil had not been included in drought-relief funds, even though these items would be of great value within the scope of the people's regular diet. Transportation expenditure totalled \$136 556. Mr Kangai told the House that the Government's financial contribution of relief supplies by Government were recoverable from the private sector. The Ministry temporarily borrowed \$2 272 961 from the Ministry of Water Development for its drought-relief activities. The recoverable advance was made pending the Ministry of Water Development's allocation of its own funds. If the recoverable costs, he said, were to be paid to the Ministry of Water Development and the transport costs were to be paid from the total expenditure up to December last year, the Ministry amounted to \$6 307 101. This was 33 per cent of the total allocation of \$19 055 000. "Were the drought situation to worsen, the remaining \$12 747 899 would not be sufficient to sustain the same number of people," he said. "The Government's reserves will run up to about November 1983. At that time, if the drought is still as bad, funds will run out, and the Government will have to increase severely the drought, especially if the drought is as bad as it was last year, we may have to provide more drought-relief items than we have in the past." (Text) [Harare THE FINANCIAL GAZETTE in English 4 Feb 83 p 1]

... after without authority is a punishable offence. The Minister of Water Resources and Development, Ede. ... yesterday. The Deputy minister was ... Nyazika (MPP, Mashonaland West) ... been taken to stop the sale of water ... the question had arisen ... water was being sold for ... in Mashonaland. Ede Kapuranga said in ... the Minister of Water Resources ... township as a body corporate established ... in-pursuance of the ... of the United Kingdom shall sell ... which he holds a right unless he ... (Text) (Harare THE HERALD in English)

... at Mapandawana growth point in ... the main source of ... Administrator, Ede Greene Nyazika ... strict water conservation measures would ... were drying up in the drought. ... and woodlands is almost half empty now. ... we could be faced with a serious ... industrial complex and residential ... water so its conservation was ... production has been severely ... programmes have been launched, said Ede ... the surrounding communal land. ... programmes in the area ... the provision of water ... the refinery because it depended on groundwater. ... had died and ... (Text) (Harare THE HERALD in English)

ECONOMIC MEASURES FOR PROTECTION, USE OF NATURAL RESOURCES

Moscow FINANSY SSSR in Russian No 1, Jan 1983 pp 33-37

Article by V.M. Afremov, Candidate of Economic Sciences and senior scientific worker at the Scientific Research Institute of Finance: "Payment for Natural Resources in Industry"/

Text Natural resources -- water, air, minerals, timber, soil -- play a tremendous role. These important components of man's habitat and productive forces serve to satisfy extremely diverse requirements of society. Our country has rich supplies of natural resources at its disposal which define to a considerable degree its economic might.

The requirements for natural resources are increasing annually in connection with the rapidly developing national economy. Meanwhile the natural scantiness of these resources, the inability to reproduce many of them and the large expenditures required for developing new deposits are moving into the foreground the task of ensuring that they are used and protected in a rational manner.

The requirement for a thrifty attitude towards natural resources was advanced by the state during the very first years of Soviet rule. V.I. Lenin's idea concerning the need for realizing maximum economies in the use of natural resources provided the foundation for measures carried out in our country aimed at protecting nature. The natural resources of the USSR have been nationalized and are the property of the people. This circumstance favors their more efficient utilization. Many problems concerned with the rational use and protection of natural resources are reflected in the decisions handed down during congresses and in the party and governmental decrees.

The 26th CPSU Congress established the tasks for providing greater protection for nature during the next five-year period and into the future.

State control over the attitudes towards protecting and ensuring rational use of the natural resources in our country is reinforced by the laws of the USSR and the union republics. Based upon these state documents, the problems concerned with studying, developing and ensuring the complete utilization and protection of natural resources are included in the plans for economic and social development, while taking into account the important role played by the natural environment in the development of production and improving the health and well-being of our Soviet people.

From the point of view of measures being carried out in the interest of achieving rational utilization of nature, use is being made of a progressive technology of extracting and processing minerals -- low-waste product and non-waste product technology of raw materials -- use is being made of local types of raw materials and also secondary resources and so forth. At the same time, a complete system for protecting natural resources is being developed and placed in effect. Work is being carried out in connection with the reclamation of land, preventing wind and water erosion of soil, preventing and reducing the contamination of soil, water and air by toxic chemicals and industrial and agricultural wastes and so forth. State supervision and departmental control have been established over all of these operations.

During the First Five-Year Plan, 10 billion rubles worth of state capital expenditures will be expended for measures aimed at protecting nature. In addition, considerable resources are being allocated for this purpose by industrial enterprises, sovkhozes and kolkhozes.

Important successes have been achieved in the work concerned with the rational utilization of natural resources. However, noticeable losses are still being incurred in many instances and the available supplies are not always being used in a satisfactory manner. Certainly, this is causing great harm to the national economy and to the well-being of its population.

Many of the causes are economic in nature: a low cost evaluation of the natural resources are insufficient stimulation for their rational utilization. There is a need for organizational-technical and legal measures, a requirement for work for strengthening existing ones or introducing additional economic measures which will encourage the best utilization and protection of natural resources by enterprises and departments. It is our opinion that those enterprises which use natural resources should employ measures which will provide for reimbursement for the expenses involved in the reproduction of or for the loss of these resources.

After the above economic measures have been adopted. The Joint Commission for the Economic Evaluation of Natural Resources and Measures for the Protection of the Environment of the USSR Academy of Sciences and the USSR GKNT (Committee for Science and Engineering) developed a "Provisional Standard for the Economic Evaluation of Mineral Deposits," which was approved in 1974. Its adoption will promote a more sound monetary (cost) evaluation of natural resources, will increase the national economic effect and will stimulate rational utilization and conservation. The economic evaluation can be used, for instance, to estimate the losses for mineral losses during the extraction and utilization of minerals for above-normal losses of supplies in the extraction process in accordance with a decree adopted in 1979 by the USSR State Committee for Labor and Wages of the USSR Council of Ministers, which stipulates that enterprises and organizations which do not observe the requirements for the protection of nature and for the use of natural resources are to be deprived, wholly or partially of the bonuses issued for the principal economic activities. In accordance with an existing statute on the use of water resources, a payment was introduced in 1979 for the diversion of water from aquicultural

However, solutions are still not being found for some problems associated with the rational use of nature and in the case of a number of these problems the scientists and practical workers differ in their opinions as to how best they can be solved.

With regard to achieving a more rational use of nature, great importance is attached to the payments for the use of natural resources. This includes payments into the budget for geological-exploratory work, fixed (rental) payments, forestry income and payments for water. Each payment occupies a definite place in the system for mobilizing and distributing the financial resources of the state.

The proportion of payments into the budget for natural resources, compared to the overall income, is negligible, although the role played by such payments is very great.

In actual practice, the existing system for making such payments has a number of substantial shortcomings. The payments for geological-exploratory work do not compensate for the actual expenditures of the state, they do not encompass all of the types of minerals and they are not always considered to be the most effective method. The rental payments do not take into account the totality of rent-forming factors, in many branches of the extractive industry they have not even been introduced into operations and the methods for computing them leave a great deal to be desired. During some periods the forestry payments do not cover the expenses for forestation and reforestation work and they do not fully take into account the differentiated rent for forestry resources. The absence of an effective mechanism for stimulating the rational utilization of natural resources also serves as a serious shortcoming.

In this regard, a great role can be played by payments for the resources, structurally differing from existing payments but combining their functions, the new payment structure will make it possible to take into account and to compensate the budget for expenses incurred for the development of resources and to create relatively uniform economic conditions for those organizations and enterprises which utilize resources of different quality, material interest and rational utilization of nature.

The problems concerned with payments for natural resources have been under discussion in our economic press for a long period of time. Many Soviet economists consider such payments to be advisable. For example, N. I. Khachaturov stated that the thriftless utilization of natural resources is harmful to the interests of society and that more efficient use of these resources should be stimulated. He proposed the introduction into operational practice of an economic evaluation for resources and payments for their use. Some Soviet economists negate the legality of payments for natural resources in the USSR, since under socialism they are nationalized and are a state form of ownership, thus rendering such payments impossible; they maintain that a full-fledged purchase document is required for such resources for commodity production. In this regard, the resources cannot be viewed as a commodity or as a good (valuation, price). We consider such a point of view to be incorrect.

* Khachaturov, N. I. "Concerning an Economic Evaluation for Natural Resources," *Trudy Gosstatizna*, 1964, No. 1.

in a socialist society, where the natural resources are in the hands of private owners, they are viewed as a commodity and have a cost value (price) and during the sale and purchase process they are taken away from their original owners. In a socialist society, the natural resources belonging to the state are also transferred over to individual economic subunits (enterprises) for use. However, the conclusion is still that following a transfer the state continues to remain the owner as the representative of society on the whole. Under such conditions, a sale and purchase document is only formal in nature. In a socialist society, natural resources are not viewed as a commodity in the same way as they are on the capitalist market. However, in the interrelationships of socialist accounting enterprises, during the period of their transfer from one enterprise to another, they assume the form of a commodity and thus must have a price (cost value, price). The price for natural resources is a form of payment for their use.

The introduction of a payment for natural resources raises the need for solving a number of problems, mainly of a methodological nature: determining the objects of payments, the structure, special purpose functions, production cost accounting principles for differentiation and the effective periods for the payment, and the stimulating mechanism, establishing the system for determining the production costs, profits and prices and uncovering the financial results of the payment and the trends for its use.

First of all, this payment should be exacted from the primary consumers of the natural resources, since they are the ones who procure and use the natural resources required for their own production activities. The payers must be the industrial enterprises (associations, combines) which extract the minerals, timber or consume the water. A payment should obviously be made for each type of natural resource separately. Definite physical units (ton, cubic meter) can serve as natural objects for ratings.

The payment for natural resources should be organized according to uniform principles and arranged on the basis of a uniform structure. The structure for payments for natural resources is different. A forestry payment includes payment for forestry management expenses and for differential rent. In the case of minerals, reimbursement is made for geological exploratory expenses and payments are made. At the same time, the payment for water includes the amount required for covering current expenses for the water resources.

The payment for natural resources consists mainly of their price, the structure for this payment must include the expenses and profits of the enterprises of the forestry, water and geological exploratory economies and it must also account for differential rent. If required, its actual structure must be determined for rational utilization of natural resources.

The introduction of payments obviously requires the establishment of a system of prices, one which will be greatly dependent upon a correct determination of the value of the natural resource and the payment structure. The prices must be determined according to the sum of the expenses and the payment level for the individual types of natural resources.

The payment structure should ideally include the expenses of the geological-exploratory, forestry and water organizations for covering the current and economically sound expenditures for their geological-exploratory, forest management, water treatment and other operations, carried out prior to the commencement of exploitation (minerals, timber) and utilization (water) of the natural resources.

The amount of profit required by these organizations for normal cost accounting activity and for the formation of the economic incentive funds can be defined as 12-15 percent of the value of their productive capital or production costs.

The differential rent income is defined as the difference between the public cost (price) of the natural resources sold and the individual expenses of organizations for finding them, preparing them for consumption and for extraction, procurement and utilization. The total amount of differential rent income of a branch or the whole will appear as the difference between the total amounts of this income and the differential rent losses of individual enterprises and organizations. An excess of the rent income over the losses of the entire branch occurs as a rule at those times when relatively higher expenses are accepted as the basis for a price than the average branch (territorial) expenses. For all practical purposes, this is the situation in the petroleum and gas industry.

Individual economists feel that it is not advisable to establish the amount of payment for natural resources in a percentage of the cost (price) for the natural resources, by analogy with the payment for the productive capital or their production costs. In this instance, the more natural resources that an enterprise places in economic circulation, the greater will be the payment that it will have to make into the budget and this naturally diminishes their interest in above-plan extractions of minerals, timber procurements and so forth.

Average branch payment rates can be computed in the plan for individual types of natural resources by dividing the total amount of a payment by the volume of resources sold (minerals, timber) or water diverted. The payment rate for a unit of mineral or timber sold is higher as a rule than that for a unit of resources extracted or procured: indeed the extraction and procurement volumes are smaller than the sales volumes, since losses are inevitable during the exploitation of natural raw materials. A higher rate of payment in instances of above-plan losses for a given type of natural resource stimulates to a higher degree its efficient utilization. The greater the losses the higher the payment.

In connection with the establishment of an average branch rate of payment for natural resources, a question arises regarding the principles for its sound differentiation. Some economists advocate a differentiation of the rates depending upon the territorial expenses for geological-exploratory, forestry and water organizations for searching for minerals, managing forests, treating water and so forth, defined by zones (regions in which the natural resources are located). Such expenses can differ sharply for individual regions of the country. However, it is not considered advisable for the rates to be differentiated according to this factor.

It should be borne in mind that in the case of unified wholesale branch prices for the same products of enterprises which use natural resources, a

differentiation of the payment rates depending upon the territorial expenses of the supplier-organizations for these resources leads to the formation of different profits and profitability per unit of output, for reasons which are dependent upon the activity of the enterprises. And this undermines the principle of cost accounting, distribution according to labor and material

Therefore, it is more sound for all of the payer-enterprises to provide reimbursement for the mentioned expenses in identical amounts (in the amount of the average branch rate) per unit of output. At the same time, the rates for the payments should be differentiated according to the rent forming factors, in order to achieve a relative smoothing out of the differences in the indicators for the work of organizations, payer-enterprises and the utilization of natural resources.

According to the plan, the payment rates for natural resources should be computed for the five years -- the effective period for the plans for the economic and social development of the USSR and for the purposeful functioning of the enterprises. It is believed that these rates should be established in firm amounts per unit of output and differentiated by years of the five-year plan according to the changes in the production costs and in the rent-forming factors. The actual amounts of the rates may differ from those planned according to the different degree of utilization of the natural resources.

Furthermore, such a system will make it possible to determine more accurately the amount of the payment rates by years of the five-year plan, to examine the financial forces for covering the expenses of geological-exploratory, forestry and management organizations and to utilize the natural resources more rationally.

As a means of fine-tuning enterprises for the irrational utilization of natural resources -- above-normal losses of minerals and timber, excessive use of water -- the system is an effective stimulus. In such instances the actual amounts of the losses exceed the planned amounts. Such a system is already being established for minerals and water and it should also be established for timber. In our opinion, the rates for fine payments must exceed the planned rates by no less than threefold. In the process, the total amount of the fine payment should be determined by multiplying the fine rate by the amount of resources lost over and above the norm (minerals, timber) or used above the limit (water). The contributions to the incentive funds of the enterprises will be reduced by this same amount.

Points with regard to the selection of the cost category (production cost, price), in the structure of which the payment for the natural resources should be taken into account. We consider it to be theoretically correct to include the production costs of enterprises -- consumers of these resources in the expenses and profits of supplier-organizations for the natural resources required for further production consumption. The differential between the payments and the consumer-enterprises must be singled out in their accounts. The total amount of the payment, determined according to the losses, should be included in the actual production costs of the enterprises, thus reducing the amount of their profits.

In many instances the inclusion of a payment for natural resources in the production costs of consumer-enterprises increases their expenses to such a degree that in the absence of a search for additional financial resources the enterprises operate at a low profitability or even at a loss. Such sources can include raised prices, profits and turnover tax.

An increase in the wholesale prices of an enterprise for natural resources will increase the prices for the products produced from these resources and also growth in prices throughout the entire national economy and this is fraught with undesirable economic consequences. Thus, to the extent that it is possible to do so, this task should be solved with no increase in prices. For example, an increase in the production costs for some minerals (natural gas, construction materials and so forth), when introducing payments for natural resources, can be compensated by reducing a portion of the profit intended to be added to the budget in the form of net surplus. In the petroleum branch -- to reduce partially the turnover tax in the industrial wholesale prices for petroleum products, after having increased the wholesale price of the enterprise for crude petroleum (with no change in the industrial wholesale prices for the petroleum products). In the process, a reduction in budgetary income owing to losses in profit and turnover tax is compensated by a reduction in budgetary appropriations for acquiring natural resources. As a result, no requirement exists for raising the prices and a reduction takes place in the volume of monetary funds to be distributed among the national economy.

In our opinion, payments for natural resources should be gradually introduced for their individual types, taking into account the available potential and the creation of the required conditions.

A question arises with regard to the utilization of this payment. Obviously, a portion of it should ideally go to the supplier-organizations for the natural resources, in amounts which will compensate them for their expenses and provide them with the profit required for normal cost accounting activity. In those instances where the supplier-organizations are directly reimbursed for their resources and provided with cost accounting profit, the consumer-enterprises for natural raw material find themselves in an unequal financial situation, since their expenses and profits vary. Thus, initially the payments for natural resources for expenses and providing the necessary profit for the geological-mineral, forestry and water organizations -- the consumers of the natural resources -- must be added to the centralized funds for financing the USSR Ministry of Geology, the USSR Ministry of the Timber, Pulp and Paper and Wood Processing Industry and the USSR Ministry of Land Reclamation and Water Conservation. Through a transfer over to the departmental organizations will be taken into account their specific expenditures and profits.

It is our opinion that the differential rent of individual enterprises and organizations should be placed at the disposal of the branch ministries or departments, for covering the differential losses of the corresponding enterprises and for its redistribution within the branch.

It is also our opinion that the transferring a portion of the differential rent of enterprises and organizations to the branch ministries or departments, for covering the differential losses of the corresponding enterprises and for its redistribution within the branch, must be with tax from the

... and organizations as income which is not dependent upon their
... secondly, for achieving better interest on the part of the
... the effective utilization of nature, the raised rates (fines)
... rational use of natural resources should be added to the budget.

... the payments made to the budget can be used for financing measures
... raising the effectiveness of use of nature and for awarding bonuses to
... who achieved fine results in the exploitation of natural resources.

... the proposed system for introducing payments for natural resources will
... it possible to carry out a number of important functions:

... reimbursement for the expenses of geological-exploratory, forestry
... organizations and to ensure that they earn profit for normal cost
... activities;

... point out the objective differences in the expenses and profits of those
... organizations and enterprises associated with the influence generated by rent-
... factors on the results of their financial activities;

... stimulate the rational utilization of natural resources.

... the organizations are being created for converting over to cost
... principles those organizations which presently are operating mainly
... basis of budgetary financing and which are experiencing very little
... in their economic activity; the principles of material interest and
... according to labor among organizations which utilize natural
... of varying quality are being strengthened; improvements are being
... the effectiveness of utilization of nature.

... there is no longer a need for the independent functioning of such
... in the budget as withholdings for geological-exploratory work,
... and rental payments.

... set forth above for the development and functioning of payments
... for all types of natural resources and this certainly does not
... possibility, when deciding upon the payments to be made, of taking
... certain specific peculiarities of their individual types.

... for natural resources do not represent the only solution for the
... are others. In particular, they include the establishment of
... prices for natural raw materials or improvements
... for the sale of finished products, the introduction of
... systems for issuing material incentives to workers who have achieved
... of natural resources and more rational methods for computing and
... payments for natural resources.

... measures as a rule are individually capable of
... whereas the proposed system of payments for natural
... will make it possible to solve a complex of problems associated with
... utilization of nature.

... 1983

VIOLATIONS OF LAWS ON PROTECTION OF NATURAL RESOURCES

Omsk ZEMLYA SIBIRSKAYA, DAL'NEVOSTOCHNAYA in Russian No 10, Oct 82 pp 46-47

[Article by L. I. Pastukhov, candidate of juridical sciences, and A. G. Lukash, student at Omsk University: "For Violation of Rules of Protection of Nature"]

[Text] The solution of ecological problems, primarily from the position of an efficient utilization and reproduction of natural resources, is also of great importance in the fulfillment of the main task set by the CPSU--ensuring a further rise in the well-being of the Soviet people. Legal methods occupy a special place in the set of measures for the protection of natural resources. In recent years the Soviet state has paid much attention to a clear-cut legislative regulation of the protection of nature. A number of USSR laws on the protection of the atmospheric air, animal world, water resources and so forth have been adopted. The laws "On the Protection of the Atmospheric Air" and "On the Protection and Utilization of the Animal World" have been adopted in the Union republics, including in the RSFSR, at the fifth session of the RSFSR Supreme Soviet of the 10th convocation in July of this year.

All these acts imbued with concern for the welfare and health of workers represent the realization of the Leninist principles of socialist nature utilization. At the same time, the protection of nature is also most directly related to the fulfillment of the top program approved by the May (1982) Plenum of the CPSU Central Committee. Legislation, defining the tasks of state bodies and the importance of the protection of natural resources, also establishes juridical sanctions for acts harmful to the objects of nature. This article offers an analysis of the legal measures and sanctions are directed toward the suppression of offences against nature characteristic of rural areas and our region.

The right of reservoirs and forests is an important potential for an increase in productivity and, consequently, for a rise in the material standard of living of the Soviet people. The curtailment of industries connected with the gifts of nature (fishing and hunting) in the last few years requires not only reproduction measures, but also intensified control over a rational utilization of water and forest resources and the creation of a situation ruling out impunity for offences. The curtailment of suppression of violations of fishing and hunting rules and of water protection legislation points to the need for such control.

During the first two years of the 10th five-Year Plan the Verkhne-Bureya Administration uncovered more than 49,300 violations of fishing rules. In 1981 the Verkhne-Bureya District Inspectorate detained 2,044 poachers. In accordance with the

...residium of the USSR Supreme Soviet dated 27 March 1964 "On increasing administrative liability for a Violation of the Rules of Fishing and of the Fish Reserves in USSR Reservoirs" persons guilty of a violation of the Rules of Fishing are subject to a fine: citizens, up to 10 rubles and officials, up to 50 rubles for a gross violation of the indicated rules, if there is no criminal liability. For a gross violation of the indicated rules, if there is no criminal liability, a fine of up to 50 rubles on citizens and of up to 100 rubles on officials. These sanctions are applied by fish protection bodies along with compensation for the damage done to the state at the established rate (for example, for the loss of a common and Caspian sturgeon, 100 rubles, nelma and salmon, 75 rubles, trout, 50 rubles, humpback salmon and muksun, 30 rubles, sterlet, 20 rubles, etc., etc. and so forth).

...of fines imposed on violators by the Verkhneob'rybvod Administration totaled more than 250,000 rubles. In 1981 the Omsk Fish Protection Administration imposed fines of about 35,000 rubles on more than 1,900 people. A number of materials were transmitted to investigating bodies for the solution of criminal cases and for instituting criminal proceedings against violators according to articles of the RSFSR Criminal Code providing for a sanction of up to 4 years of imprisonment.

Water resources and sanitary and fishing supervision have a direct effect on the development of fish breeding and fishing. Legislation entrusts such supervision to sanitary inspection and fish protection bodies. In particular, the sanitary inspection service controls the implementation of measures for the prevention and elimination of pollution of surface and underground water with harmful substances, industrial effluent and household waste. The fish protection inspectorate supervises the operation of enterprises discharging sewage and waste into reservoirs and the commissioning of projects using fishing reservoirs for discharge of effluent. For example, in 1980 the Omsk Fish Inspectorate carried out supervision of industrial enterprises and uncovered 117 violations connected with pollution of reservoirs.

At the same time, an analysis of the normative acts and practice of supervision in the fish industry makes it possible to draw a conclusion on the need for an expansion of the powers of fish protection inspectorates. The point is that, while in the supervision of reservoirs they have the right to submit proposals for the liquidation of hydraulic engineering, transport and other types of operations, while in the fish industry, to the appropriate bodies, they have no administrative sanctions. At the same time, according to the regulations, the sanitary inspectorate has the right to impose a fine on violators.

Violations of the water protection regime--mismanaged and arbitrary construction and contamination of water and commissioning of enterprises--are preventing the pollution and contamination of reservoirs--water resources. In accordance with legislation such violations are punishable by fines of up to 50 rubles on citizens and of up to 100 rubles on officials. These are imposed by bodies for the regulation of the use of water of the USSR Ministry of Land Reclamation and Water Resources, the USSR Ministry of Geology (in the part of underground waters) and the USSR Ministry of the Maritime Fleet.

As we see, several supervisory organizations guard our country's water resources, but a wasteful attitude toward them is still prevalent. The literature (A. I. Kuznetsov, "Administrativno-Pravovaya Okhrana Prirody Basseyna Ozero Baykal" [Administrative-Legal Protection of Nature in the Basin of Lake Baykal], 1957 and so forth) and the periodical press wrote about this. For example, concern for the fate of Lake Nadezhdinsk in Omsk Oblast, for small reservoirs and so forth was often expressed (OMSKAYA PRAVDA, 17 July 1961).

Forests, like land, mineral resources and water, are the exclusive property of the state and, naturally, it is interested in their reproduction, protection and efficient utilization. The "Case of the Presidium of the USSR Supreme Soviet dated 6 August 1960 "On Administrative Liability for a Violation of Forest Legislation" prescribes for liability in the form of a fine of up to 50 rubles on citizens and of up to 100 rubles on officials for such violations as illegal cutting of and damage to trees and shrubs, destruction of forest crops, seedlings and young plants, violation of the established procedure of the use of forest resources and so forth. Such seemingly harmless offences as arbitrary hay mowing and grazing of livestock on the land of state forest resources not covered with forests and arbitrary gathering of wild fruits, berries, mushrooms and nuts on plots where this is prohibited and possible only according to forest permits involves a fine of up to 10 rubles on citizens and of up to 50 rubles on officials.

Industrial enterprises often become the enemies of forests, damaging them with sewage, chemical substances and industrial discharge and waste. The officials of such enterprises incur liability in the form of a fine of up to 100 rubles.

The violation of fire safety rules does tremendous damage to forest resources. Fire danger is especially high during summer time. For example, 312 forest fires broke out and more than 400 hectares of forest areas grown by man with a great deal of productivity were destroyed in Omsk Oblast in 1961. Damage of a significant amount was done to the state and it is compensated very slowly. Forest protection bodies imposed a fine on 172 violators of forest legislation, that is, up to 100 rubles on officials and up to 50 rubles on citizens. With respect to many violators materials were transmitted to investigating bodies. Illegal cutting and arbitrary seizure of forest land are still widespread.

Violations of forest legislation are closely connected with offences endangering the animal world in forests. The state establishes rules of management of a hunting territory and of hunting, whose violation may involve both administrative and criminal liability. Citizens who are members of the Society of Hunters, have a license for hunting within the hunting minimum and have paid a state duty have the right to hunt with sporting guns. Hunting of prohibited types of animals and fowl with traps, large caliber dangerous or destructive guns and methods, with a rifle and by firing to other persons or organizations and with a violation of the hunting minimum on a certain territory at a prohibited time and in a prohibited manner are violations of hunting rules.

Violations of hunting rules, along with criminal liability, result in administrative liability in the form of a fine of 50 rubles with or without a suspension of the right to hunt for a certain period of time. According to the data of the Omsk Oblast hunting administration, in 1961, along with criminal liability, resulted in administrative

the legislative act of the USSR and the autonomous republics established a sanction for a violation of hunting rules consisting in the right to hunt for the period of up to 3 years for a violation of these rules. However, this measure of punishment is not used to persons for whom hunting is the main source of

income. It does not extend to the damage done to a hunting facility per person (adult or minor) regardless of its age. For example, in Arkhangelsk Oblast, the fines for shooting an elk are set at 500 rubles, a bear, 200 rubles, a moose, 100 rubles, a hare, 20 rubles and so forth. The damage done by illegal hunting in this oblast in 1981 totaled 1,200 rubles. More than 1,200 violations of hunting rules were detected and 20,000 rubles of fines were imposed. A total of 149 persons were taken away from work and criminal proceedings were instituted against 111 persons.

There are also shortcomings in the application of sanctions for a violation of hunting, fishing and forest legislation. In particular, the damage done to the environment and damages done are by no means recovered fully. For example, the damage done by poaching comprises a little more than 5% of the total damage. In 1981 only one-third of the damage done was recovered and recovery of fines in connection with violations of hunting legislation comprised a little more than 8% percent. Of course, such a situation reduces the efficiency of the fight against violations of the legislation on hunting.

Enterprises servicing gas purification and dust collection installations in the environment. Control over the operation of such enterprises is exercised by the State Inspectorate for Control Over the Operation of Enterprises Serving Gas Purification Installations. A violation of the rules of operation of such installations and their denatification and removal from service bring about a fine of up to 100 rubles. In turn, ignoring the orders of the State Inspectorate for Control Over the Operation of Gas Purification Installations brings about a fine of up to 50 rubles. Fines are imposed on officials by administrative agencies and on citizens and collective farms by people's deputies.

There are also shortcomings in the operation of transport facilities. For example, the State Inspectorate for Control Over the Operation of Transport Facilities (the State Inspectorate for Control Over the Operation of Transport Facilities) does not exercise control over the operation of transport facilities. In its opinion, administrative legislation provides for a system of road traffic rules and control over it. The State Inspectorate for Control Over the Operation of Transport Facilities, it does not exercise a clear inspection of the operation of transport facilities. Moreover, every year the number of violations of road traffic rules is increasing.

To be sure, the preservation of the beauty of nature, rational utilization of its unique resources and provision of the purity of the atmospheric air can be attained not only by legal state measures, but also by the development in the Soviet people of a sense of concern and responsibility both to present and future generations.

RIGHT: Zhurnal "Zemlya sibirskaya, dal'nevostochnaya", 1982

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THE ENVIRONMENT IN LATVIA

Latvian Republic, 1990, p. 4

Latvian Republic, Minister of Justice, candidate of legal sciences, Dr. J. Ilze, "The Law and the Law": "In the Interests of Protecting

the environment, a scientifically substantiated system of legal measures is being developed for protecting the natural resources and using them

Latvian Republic, Ministry of Justice, candidate of legal sciences, Dr. J. Ilze, "The Law and the Law": "In the Interests of Protecting the environment, a scientifically substantiated system of legal measures is being developed for protecting the natural resources and using them

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... normative documents, that are in effect certain special statutory rates that
... assess the amount of damage that has been inflicted upon the environment.
... material responsibility ensues, irrespective of what of the guilty individual
... been brought to administrative or to criminal responsibility -- in any case he
... repair the damage, as a rule, in the full amount.

It should be noted that whatever the sum that is imposed to repair the damage, every-
... thing that has been obtained illegally is confiscated, and if that which was
... obtained was used by the transgressor or was sold, he must repay its value at
... the retail price.

It also provided as a result of the pollution or contamination of bodies of water,
... the material damage may be repaid by the enterprises, institutions, or farms (and
... individuals) of that.

During the present year, a decree of the President of the USSR Supreme Court
... will be put into the appropriate articles of the republic's Criminal Code
... and its changes and additions that are aimed at the further reinforcement of the
... protection of the environment. It would seem that this should be discussed in
... the future.

Article 225 of the Criminal Code currently stipulates the responsibility
... for the pollution of bodies of water and the atmospheric air, but also
... the contamination of the soil. The persons who can be brought to criminal respon-
... sibility are the officials and citizens who are to blame for the fact that the
... has been put in a state that is unsuitable for economic use as a result of
... improper storage of poisonous chemicals or the dumping of production, con-
... sumption, and other waste products.

The Soviet Union, in Article 225, criminal responsibility for the pollution
... of the surface and underground water caused if that pollution was caused by
... the dumping of waste products which had not been purified or rendered
... innocuous. It was under that bodies of water are seriously polluted by poi-
... sonous substances, mineral fertilizers, and poison chemicals when they are carelessly
... stored, transported, or used. With a consideration of that fact, Article 225 of
... the Criminal Code stipulates criminal responsibility for the pollution of bodies of
... water and the soil, in the consequences indicated in the
... article. It should be noted the question of the possibility of causing
... damage to the environment, to the national economy, or to human or plant life.

It should be noted that the pollution of the surface and air is stipulated
... in the Criminal Code -- underground water pollution. It should be noted
... that the pollution of the atmospheric air, as a result of the use of
... means of transport, railroads, etc., is not stipulated by the law.

It should be noted that the pollution of the soil is stipulated in the
... Criminal Code -- underground water pollution. It should be noted
... that the pollution of the atmospheric air, as a result of the use of
... means of transport, railroads, etc., is not stipulated by the law.

[illegible][illegible]

administration for greenery. In the near future the extraction of water from them is to double. The implementation of this decision requires control.

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ART. 10. V. 10: "oresund Now Free of Sludge for One Month"

At the same time, he told BERLINSKY that it is now hoped that the project will fulfill the expectations that were properly hoped for in the still larger investment.

... in the shale incineration plant since it started ...
... the two German-supplied units have had a low ...
... then has already been replaced by the ...
... taking care of the incineration alone without ...
... the second one replaced, and want the supplier ...
... payment will be decided in arbitration.

and the water level has grown more than anticipated.

The engineers said further that they have begun a study of the loading of the dam, and the acceptable loading has not been surpassed. In addition, the dam has been much cleaner since Lynetten has been in operation, and the bathing water is completely satisfactory to use. It is still the cleaner, and that will happen when the old oven is replaced after a few years.

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NITRATE POLLUTION THREATENING GROUND WATER

Copenhagen ANILLLI in Danish 12 Feb 83 p 26

Article by Carl-Johan Rosenberg: "Nitrate Pollution Threatening Ground Water".

[text] It is probable that the quality of the ground water in several areas of Jutland is threatened by steadily increasing nitrate pollution, and this is increasingly being confirmed.

In the north of Limfjorden County shows noticeable steadily increasing nitrate in the ground water during the period 1970-1980. (1980) the amounts are double the amount, but in general the amounts during this period are 50 percent.

In the last couple of years there has been talk of a decline, but this is attributed to unusual climatic conditions, and is unfortunately not confirmed. According to geology assistant Jens Hadsjar Pedersen, the Limfjorden County water authority, he estimates that the nitrate levels are still declining in the future.

The increasing nitrate pollution of the ground water is not only a problem for the water supply, however, but also for the environment. When the ground level is low during the autumn and winter months, the water table is high, and nitrate will be drawn up into the plants. This is a problem for the environment, and it is also a problem for the water supply. The water supply is not a problem, but the environment is a problem. The water supply is not a problem, but the environment is a problem.

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... result is that there is no general knowledge of
... drink water with amounts of nitrate which
... amount.

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... concern that an infant in Gram apparently was
... nitrate, with rumps and blue coloring of the face after drink-
... water with ... milligrams of nitrate per liter (the child was
... this and other factors the environmental admin-
... information about ground water quality in the most

... are known of both 200 and 300 milligrams
... That is usually in farm wells, which have
... pollution with surface water. On the other
... administration knows of no waterworks water with
... milligrams per liter.

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... the district parlia-
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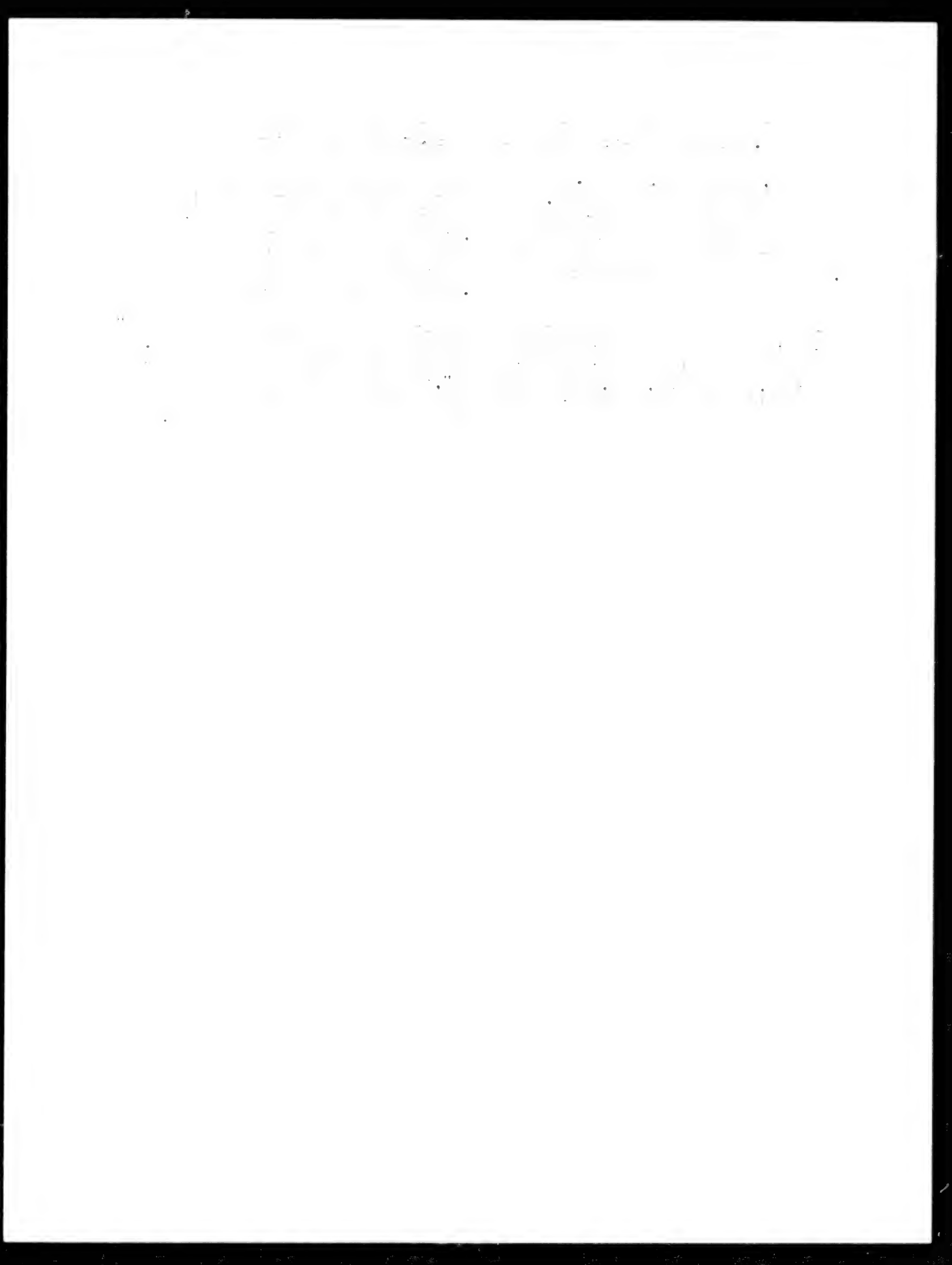
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increased significantly during the last year. Of the entire forest area (1.2 million hectares), as much as 50,000 hectares of silver-fir terrain is diseased, some of it is already dead. More than 70,000 hectares of pine forests show signs of damage.

Half of Bavaria's forests, an area covering 2.5 million hectares, have been "damaged to some extent." Heavy damage affects 10 percent. More than one-third of all the forests in the entire FRG--7.3 million hectares--show symptoms of damage, one-tenth shows heavy damage. In Lower Saxony it is said to be almost 14 percent. And the most frightening example is reported to be in the GDR: In the Erz mountains a 170,000-hectare area of forest is dead.

In the meantime research activities have started everywhere, but no conclusive results have been reached. In addition to climatic influences, the causes definitely are air pollution with sulphur dioxide, nitric oxides, ozone, dust particles and heavy metals from industry, automobiles and home heating. In this connection acid soil is mentioned as one of the primary causes, although recently incidents of damage have also been discovered on lime soil in the Bavarian Alps. The impending Bundestag elections apparently led to the fact that the dying of trees, which to date has caused damages amounting to DM 3 billion, has become an important political item--certainly a step in the direction of overdue therapy.

8991

CSO: 5000/2541

GOVERNMENT DECIDES TO LOWER LEAD CONTENT OF GASOLINE

Helsinki HELSINGIN SANOMAT in Finnish 28 Jan 83 p 11

[Article: "Cabinet Decides to Decrease Lead Content of Gasoline; Use of new Fuel to Be Delayed Several Years"]

[Text] The shift to the use of low lead content gasoline will take place in Finland gradually after the midpoint of the 1980's. The Cabinet reached the decision on the limits of lead content in gasoline on 27 January 1983.

The decision decreases the lead content to 0.15 grams per liter from the present content of 0.4 grams per liter. Health considerations are given as the reason.

Additional specifications are needed before the production and marketing of completely leadfree gasoline can be undertaken. These will be forthcoming from an air pollution control committee to be established shortly.

The Cabinet decision goes into effect on 1 January 1985, but the limitation on the lead content of gasoline does not go into force until 1 January 1986. The benzene content of gasoline is also limited on the same date to 5 percent. The limitation applies also to imported gasoline.

Considerable added costs are involved in the lowering of the lead content of gasoline. For the Neste Oy refinery at Naantali this will mean an additional investment of 150 to 200 million markkas.

In addition, the production of low-lead gasoline requires 2 percent more crude oil than the production of the present type. When converted into cost figures, these factors add from 60 to 8 pennis per liter/100 pennis=1 markka/to the price of gasoline.

Neste Oy assumes that the added costs will be included in consumer prices. Currently under discussion is whether the Neste Oy itself will be able to provide the additional investment, or whether state funding will be required.

The low-lead gasoline will reach consumer service stations only gradually, because existing supplies in Finland will last a year beyond the date at which the production of low-lead gasoline is begun.

The shift to the use of low-lead gasoline is justified on the basis of health considerations. Lead is one of the most poisonous of elements. Its effects include changes in the composition of the red blood cells, weakening in the formation of hemoglobin, and disturbances in the behavior and learning abilities of children.

Presently lead concentrations in Finland have been noted to be of a fairly low order, but certain children's playgrounds, in Helsinki at least, have been noted to have dangerous lead levels.

The lowering of the lead content of gasoline is justified in the Cabinet on the basis of long-term hazards. On the basis of health and general biological reasons, the exposure of people, particularly of children and expectant mothers, to lead contamination must be reduced to the least possible amount, in the opinion of the Cabinet.

Compression Requires Lead

Lead is added to gasoline as a motor fuel in order to improve the compression qualities. This ability to withstand compression is measured by the octane rating. Lead acts also as a lubricant in the valves.

The lead content of gasoline has been reduced to 0.15 grams per liter in many West European countries, including Sweden, Norway, Denmark, Austria, Switzerland, the German Federal Republic, Britain, Greece, and the Netherlands.

1955

CSO: 5000/2543

BARCELONA AIR POLLUTION FORCES TRAFFIC, INDUSTRIAL CUTBACK

Barcelona LA LANGUARDIA in Spanish 28 Jan 83 p 17

[Text] The gradual increase in air pollution in metropolitan Barcelona has caused the city councils to publish and enforce resolutions in an attempt to control the pollution. The emergency services of the different hospitals are filled to overflowing with the large number of persons suffering from respiratory ailments.

The campaign against air pollution is being coordinated by the Corporation of Metropolitan Barcelona. Minimal results in improving the severe environmental situation can be achieved only by joint action on the part of all the city councils of Barcelona's industrial belt. What has traditionally been done--that a city council impose whatever measures to combat pollution without the neighboring city's doing the same thing at the same time--does no good at all. Hence municipal activities are all being directed by the Metropolitan Corporation.

Yesterday the levels of pollution were considerably increased with respect to those recorded on Wednesday. Barcelona's air contained more smoke and sulfur dioxide than 24 hours earlier. The worst air quality was recorded in Sabadell, where the amount of smoke and SO₂ suspended in the air had shown a marked increase. The same phenomenon was recorded in Badalona, Sant Adria, Sant Cugat and l'Hospitalet. From the point of view of climatic conditions the only difference from preceding days was that yesterday temperatures reached much higher levels. At 1300 hours the temperature was at 19° in Lesseps Square and 21° in Sabadell. This warming of the lower strata of the atmosphere prevented the thermal inversion (which is, by definition, what makes it impossible for the environmental pollution to ascend to the highest levels of the atmosphere and settle at a level estimated at 400 meters. Furthermore, according to the official report, forecasts indicate that the anticyclone is moving very slowly but it is not likely that substantial changes will occur so that there will be very strong winds to bring about appreciable clearing.

Hospital Crowding

As happens on these occasions, public health is suffering the consequences of the pollution. Yesterday the facilities of the Clinical Hospital were filled to capacity, especially the emergency services. The hospital management

appealed to the population to refrain from presenting themselves at the center except in very serious cases. The rate of admission was constant throughout the day and exceeded the capacity of the available facilities. The personnel had to double their efforts. Most of the patients admitted were suffering from respiratory and pulmonary complaints. On the same subject, the directors of emergency services at Saint Paul's Hospital declared to LA VANGUARDIA literally that "they were full clear up to their ears, although the services had not yet collapsed." The rate of medical assistance in the Del Mar Hospital was also constant, even though it did reach the figures of the two above-cited medical centers. In Sabadell, according to Dr Jose Maria Plans, the health commissioner, "the number of citizens needing hospital care with visible symptoms of difficult breathing has increased due to the pollution." The problem worsened when the La Salut Clinic also ceased to function as a consequence of the patients who entered due to the influenza epidemic affecting the entire city. For Dr Plans, the current outbreak of flu is one of the worst in several years. The Bellvitge Residency did not escape the epidemic either. Mateu Serra, our correspondent in Baix Llobregat, informs us that the number of consultations by patients with respiratory illnesses underwent a sharp increase without causing the emergency services to collapse.

Measures for today

Due to the deterioration of atmospheric conditions, most of the city councils of the metropolitan area have drawn up antipollution regulations which will soon take effect and surely will do so. In the case of Barcelona, Mayor Pasqual Maragall has ordered that if the rates of pollution change for the worse, certain potential polluters will be required to use fuels with a low level of contaminants, hours of heating will be restricted and a transport and traffic plan will be put into effect to regulate the use of motor vehicles. Residents of Barcelona are requested to use public transport, cut down on home heating and avoid any activity that may adversely affect atmospheric conditions.

In addition, according to information reported by our correspondent Miguel Lopez, the Municipal Council for Ecology and the Environment will keep a very close watch over factories and other sources of pollution located inside the city limits. As in the case of Barcelona, they request that the residents use private cars as little as possible. In the Terrasa district of the Gisperta the city council has decreed a state of alert. Our correspondent Maria Dolores Perez informs us that the parking of heavy vehicles on Major and Montany streets has been prohibited and that double parking will be closely monitored. If air pollution increases a state of vigilance will be decreed. The same measures are anticipated in Sabadell.

The action of responsible parties in the municipal governments aim especially at controlling the pollution caused by industry. In the case of the thermal plant located in the enclave between Badalona, Sant Adria and Barcelona, they have been obliged to reduce their output and to use fuels causing less pollution. In order that the cities do not suffer from this decline in generation a transfer of electric power has been ordered from different parts of the coun-

... including Bilbao and even from France. CAMPSA /Leasing Company of the Petroleum Monopoli, Inc./ is watching over the storage of nonpolluting fuel in order to provide it as soon as necessary. The Metropolitan Corporation of Barcelona has informed this publication that "if conditions do not improve obligatory measures will be progressively imposed until the rates of pollution come down."

Political Opportunism

Any new crisis or environmental deterioration has been seized upon for political purposes. Ramon Trias Fargas, **candidate** of the Democratic Convergence of Catalonia for the mayoralty of Barcelona, has declared that "this is an accelerated problem, but the Socialists have been in the municipal government for almost half years and have done nothing to solve it." He added that he did not want to be an alarmist but that pollution in Barcelona has arrived at such a degree of degradation that it endangered the very lives of the citizens. Trias Fargas concluded by saying that "the Socialists should concern themselves with imitating the recent and successful English experiments, among other things."

12/1/76

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FIRMS REFUSE TO TAKE ON DANGEROUS JOB OF DIOXIN CLEAN-UP

Stockholm DAGENS NYHETER in Swedish 17 Feb 83 p 36

[Article by Bo Engzel]

[Text] Nobody wants to handle the disposal of barrels containing extremely dangerous poisons from the environmental scandal factory BT Kemi in Teckomatorp, Skane!

The barrels in question contain dioxin—the same poison that spread fear and terror when it was released by an industrial firm in Seveso, Italy.

Some of the barrels of dangerous poisons from BT Kemi have been transported out of the country and disposed of abroad. These shipments were handled by SAKAB, a state- and municipal-owned firm. About one thousand barrels of poison still remain in the area where BT Kemi once operated. The factory was disposed of by government authorities.

A West German firm is now supposed to pick up more than 600 of the poisonous barrels. However, the Germans refuse to take on barrels containing dioxin. That poison is too dangerous; they want nothing to do with it.

Earlier, East Germany also refused to handle this poison. East Germans had originally planned to dispose of all the poisons in the area, but later changed their mind.

Hence, for now, more than 300 barrels of the so-called Seveso poison must remain on the premises until SAKAB can arrange for a disposal site in Kvantorp near Orebro.

In the future, SAKAB will use this site to destroy all of the most dangerous industrial poisons in Sweden, including dioxins. However, experts have warned that cancer-producing substances may be released into the air when the dioxin is burned if the temperature within the furnaces drops. For that reason, some continental firms have refused to take on the poisonous dioxin from Teckomatorp.

So far, the clean-up of the BT Kemi area in Teckomatorp has cost Swedish taxpayers close to 50 million kronor. That also includes district and Circuit Court of Appeals costs associated with the legal action against the director of BT Kemi. The Circuit Court of Appeals in Malmo will shortly deliver a judgment in the environmental case, which is in a class by itself and the largest scandal of its kind in Sweden.

8952

CSO: 5000/2548

BRIEFS

AERIAL-SPRAYING LAW PROPOSAL--Municipalities will be allowed to ban aerial spraying of forests against leaf problems, according to a new government law proposal, which will go into effect 1 January 1984. There is now a general ban against aerial spraying, but provincial governments have been able to grant exemptions from year to year. In the opinion of the government, this arrangement does not allow municipalities or the forest industry to plan for the long term. There will continue to be a general ban against aerial spraying, but exemptions may be granted by forestry boards if municipalities decide not to ban aerial spraying altogether. The permanent ban was introduced 1 January 1983 after a long and controversial debate on the issue. The law proposal is based on a compromise between the nonsocialist parties following a provocative parliamentary debate in the fall of 1981. Up to now, municipalities have only been consulted on the issue of aerial spraying. According to the new proposal, municipalities themselves can ban aerial spraying. [Text] [Stockholm SVENSKA DAGBLADET in Swedish 11 Feb 83 p 1] 8952

CSO: 5000/2548

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DATE FILMED

MARCH 24, 1983

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